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HIATUS.

THE VOID IN MODERN EDUCATION,
ITS CAUSE, AND ANTIDOTE.



HIATUS.

THE VOID IN MODERN EDUCATION, ITS CAUSE, AND ANTIDOTE.

BY OUTIS.

Οὐτις ἔμοι γ' ὕνομ' ἔσθ'· οὐτιν δέ με κικλήσκουσι
μήτηρ ἢ δὲ πατήρ, ἢ δ' ἄλλοι πάντες ἐταῖροι.—HOMER.

"What do you lack? What do you buy?"—BEN JONSON.

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PREFACE.

THERE exists in all minds, more or less, an impression, that, in order to complete what is called a liberal education, there is a certain, though not very definite, hiatus to be filled up with "a knowledge of the Fine Arts." That no very precise manner of thinking prevails on this subject, is clear from the fact, that not many who use the above expression are prepared to state exactly what sort of knowledge this is. The impression nevertheless exists, and is known to exist, to such extent, that there is no good school, private or public, that does not possess a representative of this vaguely conceived-of branch of knowledge in the person or services of what is called a Drawing-master. The Music-master now-a-days (by some whimsical fatality) is not said to teach Fine Art, perhaps because his function is too clearly understood, and what he teaches too capable of being put in evidence, to entitle him to represent an acknowledged mystery?

One would think "What is 't ye do?" the question Macbeth proposed to the witches was as much expected to obtain an answer as, What is it ye do? asked of the modern Drawing-master. The only difference is that we, unlike Macbeth, never dream of asking the question while the mysterious process is at work: and it might seem scarcely fair, years after the mystic operation, if we, receding from the mutually understood conditions of the contract, were found asking, What that mystery meant? What the Drawing-master did for us, or taught us to do for ourselves? And yet, fair or not fair, we do this; and accuse our oracles of paltering with, and deluding us, much as the Scotch thane did when he awoke to a conviction of abused confidence and imposture.

Is ours a case of abused confidence and imposture? There are certainly facts that suggest such a question. There are now men of thirty musing regretfully and grudgingly on outlay of time, in the Drawing Class, which fathers (of five-and-forty) unquestioningly committed their sons to: there are serious thinkers on education comparing results of Drawing-master's and other masters' teaching; and there are further, and possibly more grave, considerations hereto annexed which this Essay purposes to treat of.

Only let the reader bear this in mind, that the mystery hitherto enshrining this subject will be most irreverently violated, and daylight let in as much as possible; to which end he will have to discern unmistakably that the human faculties are not only intellectual but emotional also; to understand that the expression "emotional" or æsthetic (*αισθητικός*, sensational*) must not be taken to mean anything or nothing; and, the better to understand what it does mean, he is advised to ask himself these questions: Is it by an exercise of reasoning-intellect, or something else, that he feels himself predisposed to shun or cultivate the acquaintance of persons whose character and actions he has hitherto had no means of rationally investigating, especially when his predilection (favourable or unfavourable) is a source of astonishment to himself, and he says "I cannot understand nor account for this antipathy or sympathy." Again, Is it by intellect or reason, or something different from either, that he "feels predisposed," rather

* "Sensational" is not here used in the now too popularly abused meaning, as wild, lawless, capricious, and insubordinate to reason; an abuse somewhat exponent of our too prevailing unconsciousness of any authentic guide and sober counsellor other than the *intellectual*, which unconsciousness is very singular as co-existent with the assumption of Christianity, a creed avowedly super-rational, and not making much of wise heads.

than chooses, to adopt this or that view of subjects unexamined? Or again, By what motive, rational or other, he addresses infants, he would conciliate, with a jargon he *feels* will be winning without knowing why he feels this? And, lastly, If it is by intellectual reasoning on the part of the infant that it is attracted or repelled?

If (without further multiplying examples) he assures himself that these results are not of intellect or reason, but the outcome and evidence of some other faculty of the soul, it is that other faculty that I have designated the "æsthetic or emotional," as distinguished from the intellectual or rational, and identified with the *elementary* source of loves, hatreds, propensities, and primary talents or predispositions for the Fine Arts and Poetry. Without despairing of a more subtle classification of the psychical human elements, I am at present contented with this broad distinction of "Intellectual" and "Emotional," and venture to place Poetry and the Fine Arts in the Emotional category, because all true poets and artists, while delivering themselves of their conceptions, are *immediately* impelled by a stimulus so far like that which prompts to love or aversion (and the other results cited) that it is not intellectually judicial or

rational any more than it is definable and intelligible, as the utterances of science and intellect undoubtedly are.

The reader may possibly prefer to distinguish these two elements as "rational intellect" and "emotional intellect", to which choice I cannot demur: he will, however, understand the import of the terms as I have used them. He will, further, understand that the main object of this Essay is not to discuss nor to advance the Fine Arts (professionally), but to point out how the emotional element, which underlies them, and other results, is disregarded and undeveloped at this time so far as (despite a pretence at filling it up) to constitute an Educational Hiatus.

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CHAPTER I.

INTRODUCTORY.

(Extracted from a Letter on the Subject.)

IF I have been long considering my answer it is because your questions about art have led on to much thinking, and this, perhaps, less concerning the immediate matter than that associated subject-matter which your way of putting the question brings forward with a novel and peculiar importance.

For you ask, first, How comes it, whilst the Greek and Latin languages, and more especially the art of Greek, Latin and, sometimes, English versification are moderately well learnt at school, that the art of expressing things visible through the natural language, that of form, is so far neglected that not one man in a hundred, who can draw to any purpose, is indebted to school-teaching for his ability to do this? And you go on to justify this statement (which I have no mind to dispute) by remarking how frequently we hear those who lament their deficiency in drawing observe, "that they verily ought to know something of the thing they had prizes for excelling in; but whether it was that the master did all that portion of

their drawing that was praiseworthy, or at least prize-worthy, or whether school-drawing was not designed to have any useful or intelligible application in this life? certain it is that they can no more draw the table than the desk that stands upon it; and, wanting the likeness of a hand, they would have to resort to the simplest and earliest form of art,—spreading out the fingers of the left hand to regulate the scoring of the pencil in their right hand, and realizing the old pleasant suspense that awaited their lifting of that left hand from the slate.”

Quite true, that the proposal to teach drawing at school imagined a vain thing; that it had no tangible outcome, save in the form of master’s fees and a bill for inevitable drawing materials: but it is no less certain that our aspiring “Gandishes” did propose sublime achievements; that, indifferent to the prosy facts of forms and their proportions, we should dip daring pencils in the rainbow, nor count any sordid cost of carmine.

And yet may we not here, out of the most ridiculous situation in this sorry farce, acquire some beginning grasp upon our subject by observing how this paying in hard cash for a looked-for, not realised, result is at least some kind of evidence of our belief in such result being possible? and very good evidence of such result (once obtain it) having a real value in our eyes? The question, then, as to a failure, which is neither referable to niggardliness nor indifference, is narrowed to a form like this:—Have we failed because the thing we sought was not to be obtained? or because we went about seeking it in a wrong way?

But first, inasmuch as you discerned a similarity between drawing and verse-making (both arts, and both imitative—the latter relying ever on a prototype), and observed that, whereas boys at school and youths at college do acquire a power of making correct, sometimes respectable, imitations of the old Greek hexameter, they do not acquire a power of imitating either respectably or correctly the commonest objects that surround them (which I grant); perhaps we cannot do better than take up the enquiry at this point, compare the mode of procedure pursued in the two cases, and connote their differences with a view to account, if possible, for so great a difference of result as is manifested in success on the one hand, and failure on the other. Now in placing side by side the two arts of verse-making and drawing, there fronts us on the threshold this striking resemblance: each art has its two distinct aspects; an exact or grammatical aspect, and a speculative or ideal aspect: and, again, each art may be viewed, considered, or studied under either of these aspects exclusively. Thus the verse-making that is learned under a master is verse-making under its exact or grammatical aspect: it is not poetry, the essence of which has never been defined or reduced to any exact laws of criticism: it is merely the art of variously combining syllables according to certain immutable prosodial laws governing rhythm, quantity, and the like. We can, and do, in short, make a versifier, but we cannot make a poet, as our masters the ancients averred, and as we in fact acknowledge by confining our teaching exclusively to the grammatical or exact aspect of

versification. And while it is not contended that there is a total absence of criticism and doctrine in behoof of the poetic aspect of verse, its linguistic proprieties and phonetic significance; if we wish to be convinced that this criticism and this doctrine are purely speculative, never claiming a constructive or genetic function, we have only to turn to the fact that these latter critics do not profess to teach verse-making, and, next, to the fact that schoolmasters who do teach it are, as a rule, not expected to be possessed of poetic genius.

It appears, therefore, that in the teaching of versification we confine our labours and attention exclusively to that part of the subject which can indeed be tested by the exact canons of grammatical criticism; and it appears, moreover, that we succeed in teaching what we undertake to teach; and can know and can show when it is taught.

Compare, now, with this, our school-teaching of versification, the mode of teaching drawing which still generally prevails in our schools.

And, first, let us verify the assumption that this art, like that of versification, has also a double aspect; an exact or grammatical aspect subject to the canons of criticism, and a speculative or ideal aspect which defies exact analysis. Let us clear each point as we go.

Now as the defect you allege (in accordance with the universal complaint) is, That our school-teaching has not qualified us to draw faithfully and to purpose any the every-day objects that surround us, it may be assumed that the drawing we desire to learn is

what is called "drawing from nature," a term which embraces factitious objects as well as natural, provided that the former as well as the latter be represented in their natural perspective of form, light and shade, etc.; the mere reference to which at once suggests a series of immutable optical conditions which subjects the drawing to fixed canons of criticism even where the objects drawn are factitious, and so possibly of arbitrary form and proportion. But how much more, when the object is a natural one, will a limning of it be subject to exact analysis? When not only its perspective presentment must be optically vindicated, but when, if a rock, it must be structurally verified by geology; if a tree, bear botanic scrutiny as to the angle of its limbs and the length of their internodes; if a leaf, pass the ordeal of Venation; if a cloud, vail its crest to meteorology; and if our familiar old friend a hand, have its muscles, joints and tendons according to their law, having a care lest the anatomist find room for *more* than two rows of bones in the carpal region (well-known hands have failed herein); else better that it spread out honest fingers on the slate and sign itself in simple ground-plan!

Is it not then evident that the art of simply drawing every-day objects is an art subject to exact critical examination and verification? Is it not clear to such, at least, as know the import of the words rock, tree, hand, geology, botany, anatomy, that drawings said to be representations and copies of the foregoing objects would, in the case of their transgressing any of the fundamental laws of the foregoing sciences, be exposed to summary conviction, conviction

in all respects as clear and palpable as that which would attend an infraction of any law of prosody?

But if you think the possibility of such conviction may be rather theoretical than practical, I will now put such a supposition to proof by taking two examples now actually before me, the one an ill-scanned line in Virgil (the blundering of a very young scholar), the other an ill-drawn etching of a chapel belonging to a Public School. At the end of the verse I find one foot too many, and two false quantities in the boy's sixth foot; at the end of the chapel I find two vanishing-points too many, and a range of windows perspectively longer than the wall they are a part of; and this wall, again, by *perspective showing*, longer than another wall which, according to *Ground-plan evidence*, is of exactly the same length.

Now one shows the boy his error by pointing to the violation of the law of ecthipsis in retaining the last syllable of 'tantum' followed by a vowel, with its monstrous consequence a seven-footed hexameter and two false quantities. And one establishes the error of the etching by demonstrating with the mathematical ruler the presence of three vanishing-points in violation of that law of perspective by which parallel lines must have one and the same vanishing-point—an infraction of law leading to the monstrous consequence of two parallel lines traversing a parallelogram and parallel to the opposite sides thereof, being neither equal to one another nor to either of those sides—of things equal to one and the same thing *not* being equal to one another! And further, instead of the boy's two false quantities in time, an almost in-

calculable number of false quantities in space. Whilst the only difference in the mode of criticism (a difference having no kind of import or significance) is as follows. For authority, in both cases, you refer to the written law: whilst, for evidence, in one case, you simply point out the dereliction; and, in the other, demonstrate it by means of a mathematical instrument.

There is no possible excuse, then, for tolerating constructive or grammatical errors in drawing any more than in prosody: and the plea, that such errors are unsusceptible or hard of demonstration, is refuted once for all. Only let us remember that, once for all refuted, this plea commands no further attention to it; a plea that still rises up, and still begs the question by assuming that, while the teacher of another art *can* be critically acquainted with his subject, the teacher of drawing *cannot* be critically acquainted with his; and, therefore, that his subject is uncritical.

But whilst there is this only difference (as I said, an unimportant one) in the mode of criticism, there is a somewhat significant difference in respect of the two transgressors: the one is a very young scholar, the other an instructor of youth. (Of this subsequently.)

I would now turn to the other aspect, both of versification and of the art with which you thought proper to contrast it, and this in reference to what results from the prevailing, and, I think, different methods of respectively teaching these arts. I have already observed that verse in its poetic aspect is neither taught nor held teachable, whilst it is to the corresponding aspect of the graphic art that our draw-

ing masters direct their own and their pupils' attention. Let us now look a little more minutely at this phase of either art. To begin with verse.

If one takes the thrilling knell-like line of Shakespeare, "The iron tongue of midnight has told twelve," with a view to ascertain what constitutes it *poetry* as well as verse, we shall find it much easier to speculate about the cause than to exhibit it. For though one may trace this to the presence of seven liquids in eight words, another to the metaphor, a third to the *prosopopœia*, and a fourth to all of these combined (which *may* be nearest the truth), it is manifest that such criticism would still be inexact, and very far from finally convincing; seeing that another verse (neither Shakespeare's nor Virgil's) "Affliction sore long time he bore" boasts a larger proportion of liquids than the last, and beats "Nec gemero aëriâ, cessabit turtur ab ulmo" in this respect. Here we may opine, and at most win converts to opinion; we may speculate, but not prove. Yet nothing is easier than to prove by indisputable evidence that all the examples cited ("Affliction sore" included) are in all respects legitimate versification.

Next to the poetic or ideal side of the sister art. Take the "Last Supper" of Da Vinci. Wherein resides the poetic element? In the composition or harmonious concurrence of leading lines? In the gradual development of emotion, culminating in the beloved disciple? In the comfortless isolation of Judas? In the pitying calm sorrow of Christ? In the vivid yet dignified colouring? In the light and shade? In the expression generally? Or in the marvellous

union of unrestrained action with sustained pictorial repose? How hard to say whether any or all of these, seeing that some one misses the *poetic* element altogether, and, demurring at the omission of a pyrotechnic glory about the Saviour's head, adduces West's "Healing the Sick" as "a poetical picture if you please." It is all well to say we cannot dispute with such a critic as this: but have we done, can we do more than *speculate* concerning the poetic or ideal aspect of this work? Can we "cut down upon it," expose, and demonstrate it, as the anatomist would demonstrate a nerve or muscle? or as he might indeed demonstrate the anatomical accuracy and propriety of the drawing and action of any figure in this absolute work? Sink to that humbler sphere of criticism conversant with the grammatical aspect of the subject, and we also call in the student of optics to verify or refute the linear and aërial perspective; the architect to declare if the building is safe and self-supporting (some "interiors" need the district surveyor); and the botanist and geologist to look out of the window and tell us about the trees, rocks, and mountains. For all this can indeed be done with critical precision, provided only that our anatomy, optics, architecture, geology, botany, are the familiar companions of one man, who not only knows and can make others know the requirements of each science, but knows also how the objects of each science will show (as in a picture) seen duly from one point of view. For science can never be put in evidence on art matters till the Scientific possess the rudiments of art or the Artist grasp the rudiments of science. And that this is no new

doctrine or unadvised demand upon the artist, witness the actual example of Da Vinci himself, who was not only familiar with all the knowledge of his time, but likewise (if we trust Hallam) some centuries in advance of it: and witness his constantly inculcated monition that the artist become "universal." Or look to Michael Angelo, with his Dome of St. Peter's, and his twelve years' study of anatomy; to Raphael with his sonnets and architecture; to mathematical Albrecht Durer, and our own humanly omniscient Dyce; but most to the brotherhood of philosophers, sculptors, and poets under Pericles, when not only the sculptural decoration but the design of the Parthenon was entrusted to the sculptor Phidias.

Examples might be multiplied; only we are not at this moment discussing the possibility of an artist so qualified being found; we are proceeding with the examination of what was called the ideal side of art, and now especially of ordinary drawing. For the connoisseurs, who in the time of Walpole found it easier and more secure talking of what was speculative than of what was exact in art, did not say their fine things so secretly but you may be sure even the drawing-masters below took their cue from such safe prompting, and have continued to take it ever since. It is poetic—so they say—and ideal, to make flourishes of the pencil stand for foliage; to draw objects indistinct and shadowy as they approach the edges of the drawing (the sacred precinct whereon abuts the mounting-board adorned with coloured lines). It is ideal to "focus" the light and dark as much as possible, and to "clear up" the monotony thence

arising by a few (preter-geological) black and white stones in the foreground. This for Landscape: but if the objects to be made "studies" of (not studied) are heads, hands, feet, etc., then the ideal treatment varies, and there is less of the zigzag and the herring-boning, and more of the hatching and italic *S*. The tails of eyelids ever turn up with a flourish, it is true, but here it is the writing-master's flourish, not the scribble. Limbs and extremities, if male, may have "a few muscles thrown in" promiscuously; if female, no muscles are allowed.

These are some of the prevailing views accepted by idealists: but to show how speculative, vague, and withal capricious is this ideal aspect of art, I could cite a drawing now under my eye, by a very popular (drawing-) master, wherein the *antimuscular* theory of female anatomy is so far defied, that a peasant woman appears with an arm possessing several boldly bulging and, moreover, supplementary muscles hitherto unknown to the anatomist, and therefore presumably beyond the range of his criticism, as effectually in all respects as that flourishing family of trees we have spoken of is beyond the scope of the botanist.

Now for the result of our comparison. What have we discovered? Simply this: The method of teaching versification, from its being conversant solely with the grammatical, the exact, and the critical, is a certainty from beginning to end; and the student's proficiency, much or little, is equally a certainty in the judgment of the teachers who, as teachers, do not concern themselves with the ideal or poetic aspect of verse; but who, let us remember, if they did, would have no

common criteria to judge by. The method of teaching drawing, so far as it is exclusively conversant with the ideal, the speculative, the uncritical aspect of its subject, is an uncertainty from beginning to end: and the student's proficiency is equally an uncertainty from an absence of all fixed criteria in the mind of the teachers, who indeed never can possess such criteria while they deal with a speculative subject, but who, (let us remember) if they thought proper to deal with those grammatical and exact elements we have shown to inhere in art, would then necessarily possess such criteria as not only lead to unanimous judgment but vindicate that judgment when it is questioned; whereas, even when our so called drawing-masters agree, they do this in virtue of no reason; they agree solely to dogmatize.

The investigation then is so far satisfactory. We have found the cause of failure and the means of avoiding it. But if we continue to endure the failure while we own and lament its existence, the question thereby suggested is not the question you proposed.

Perhaps (to hazard a conjecture) there is a measure of moral delinquency in this case, as in most curable cases, eking out the weight of the affliction. Do the parents and the guardians of our herein hardly-entreated youth put the question honestly to their heads and hearts touching two inevitable alternatives: Whether to forego the tempting gratification of showing off a gorgeously mounted specimen of drawing-master's drawing, with sunset flaring behind a haystack, the church, the cottage, and the red-cloaked Gipsy and dear old pump in the foreground, and have their

young gentleman taught something less pretentious though much more real? or to grasp at the tempting tawdry ware insidiously offered them, at the price of wasted time and irretrievable opportunity, regret, lamentation, and reproach? Ignorance, it is true, may go bail for a good deal of error; but why not then consult some Royal Academician, and hear from him (to the amazement of ignorance) that the students of our Royal Academy learn drawing and drawing only, for the most part; the few who do use the Painting School never doing so until they have devoted more months to the study of colourless crayon drawing than the ordinary schoolboy has devoted hours to the Drawing master altogether in the course of his whole school life. Such information might convince even ignorance that something very impudently mendacious lurks under the proposal to teach school-boys water-colour drawing, and "landscapes with cattle and figures." For ignorance, being honest, would at least know that this vaunted acquirement must resemble at best the base French and German that our footmen dazzle their less impudent fellows withal:—resemble, however, with this difference, that whereas the gross hash of words, with all its grammaticidal outrage and atrocity, may help us in time of need; the nauseous medley of green, blue, and red "which parents (called 'educated') have the assurance to show to some expert for his approval," has no use in this world unless as an index to vanity and vulgar arrogance. And perhaps there are few things in the way of contradiction more noteworthy than this fact; that, while well-bred people would feel compromised if their children used a vitiated

vocabulary, they have no shame, but pride rather, in exhibiting such flagrant infractions of truth and fact as the drawing-master teaches them to utter upon paper.

To return now to your question; though not with a view to elicit any further solution; for the question was straight and definite, and the answer was concise and final: not an arbitrary answer, but one that has evolved itself while the facts have been under examination. Drawing, so far as it proposes to be a truthful imitation (on a surface) of the forms of visible objects, is as capable of being taught with grammatical precision, and therefore of being learned with as much certainty,* as verse-making or any other art which owns an intelligible allegiance. If the drawing to be

* There are many crude notions abroad touching personal incapacity for art; "an eye" or "no eye" for drawing. A says B has an eye for drawing, while he A has none. I know them both, and know that A's eye is more true than B's. B, from some cause, emulation I believe, turned to drawing, learnt to like it, and improved his eye in the pursuit. B's is a better drawing eye than A's; but A's might have been much better than B's.

But just as with no poetic genius you can learn to make correct verse, so with "no eye for drawing" (*i. e.* without a specially endowed eye), you may learn to draw correctly. That the Greeks believed all men capable of learning drawing is clear from the law passed at the instance of Pamphilus the master of Apelles. "*Et hujus auctoritate effectum est, Sicyone primum, deinde in tota Græcia, ut pueri ingenui ante omnia diagraphicen, hoc est picturam in buxo docerentur, recipereturque ars ea in primum gradum liberalium. Semper quidem honos ei fuit, ut ingenui eam exercerent, mox ut honesti, perpetuo interdicto re servitia docerentur. Ideo neque in hac neque in toreutice, ullius qui servierit opera celebrantur.*" (Pliny, L. 35, c. 10.) The Greeks meant that free citizens, who might possibly patronize art privately or publicly, should know, as well as talk, about it, and so rendered impossible such a national exhibition of ignorance as we make at Charing Cross and Hyde Park Corner.

taught in future shall be not what it is, but what those who bemoan the failure of their school-teaching obviously intend it should be, there will then be no failure to bemoan.

And no less true is it that, if future teachers of classic metre turn from the exact to the speculative side of their subject, we shall have our hexameters putting forth an abnormal number of feet, and no fine inflicted for false measures. "The three-hooped pot shall have ten hoops."

Finally, to repeat the narrowed form of the proposition, with its answer: we have failed not because the thing sought was unattainable, but because we went about seeking it in a wrong way: whereof take the following illustration.

A Committee of Taste is appointed by Government to procure and superintend the erection of a public statue, with commemorative inscription in Latin, in honour of some public benefactor; the Committee, as usual, composed of members of both Houses, literary men, and artists. The statue, as usual, is a national disgrace, as deficient in the mere grammatical requisites of art as are nearly all of the monuments which foreigners smile and wonder at in St. Paul's, Westminster Abbey, Trafalgar Square, or the Royal Exchange: the Latin inscription is a creditable production, at least not wanting in grammatical accuracy. The Committee have succeeded in the latter, but failed in the former: they can judge of the art of making Latin, but not of the art of making statues. Why?

Ask, rather, this question. If the Committee of Taste, when they were boys at school learning Latin,

had acquired a knowledge of Latin in the same uncritical and inexact manner in which they acquired "a knowledge of art," is it probable that their judgment about Latin would be better than their judgment about art? Would our inscriptions be better than our statues?

CHAPTER II.

IMMEDIATE EFFECTS OF EXACT ART AND ITS TEACHING.

WE have seen that true and useful drawing may be taught in schools, and that all boys with healthy eyes may learn it. The value of its services, and the domain thereof, shall be now considered.

If any one should claim on behalf of the graphic art (art such only as I have contemplated, imitative, exact, and subject to exact criticism) that it is becoming an almost universal medium for the conveyance of knowledge, I don't know that he could do better than appeal to the undoubted fact of almost all books on science or art (nay, even fiction), relying largely upon what is called "illustration" for their success. Who now would think of writing comprehensively on engineering, architecture, gunnery, mechanics, chemistry, anatomy, surgery, physiology, microscopy, botany, geology, astronomy, optics, archæology, and even history, without more or less assistance from the draughtsman? And it is where this assistance is more, and not less, that the work, so assisted, is more successful than its rivals. True indeed, much literary ineptitude or worthlessness passes current under shelter of "accompanying plates": and, "valuing the giddy

pleasure of the eyes," we may neglect the contemplation of those fundamental principles which are only to be fathomed by mental vision; but, even so, we herein have evidence of a disposition to receive information, and a faith that it may be so received, through the medium of the graphic art, which disposition and which faith must be of incalculable value in the pursuit of our object, be that object what it may. But the object of the fifteen sciences just named is unquestionable: and seven of these are really greatly elucidated by plates; while eight are utterly incomprehensible (on paper) without drawings and diagrams of almost every object they treat of or describe.

Now the drawing here spoken of is faithful and exact. No scribble or herring-boning finds place here: but to *interpret* it *exactly*—to attain to a full fruition of its import—the language of drawing must be acquired. Let us have a practical instance of what is meant here. I happened to be present when a profound anatomist was examining a very ingenious drawing representing in one view the internal organs of the body; and he objected that certain of these organs, which he knew to be centrally disposed, were some of them not coincident with the central line; that is, they appeared thus to him because he was not a draughtsman. Had he been one, and understood drawing (which, by the way, no one does who has not practised it), he would have seen at once that, the view represented being what is called a "three-quarter" view, all those central parts that were nearest the eye must necessarily be situate nearer to the off-side of the object, just as the nose appears thus in

a three-quarter view of the face. Now this drawing, which was a means of knowledge and statement of truth to the few students of anatomy who had learned drawing rightly, was a source of confusion, and practically a misstatement to a master of the science, and simply because he had not learned the language of the artist. And it is at school that this language should be acquired, for the very good reason that makes it expedient to teach the most universal language, namely the Latin, as a *groundwork*. Now drawing is an universal language, not only much easier to learn than Latin, but it is "unsubject to confusion" incident to varied pronunciation and character. For, teach a Spaniard, a Russian, and a Hindoo to draw; and, completely ignorant of one another's tongues, they all of them unanimously and unerringly interpret the artist's. But take a verbal description of the subject just now mentioned, and that most graphic one, a description of the internal organs, ascribed to Cicero (so vividly graphic that critics have believed he must have dissected what he describes); and let the three representatives of the aforesaid nations, who we will suppose have each learned Latin, each in the character of his own language, find the original Roman manuscript: it will be decipherable only by the Spaniard, who cannot, however, impart what he learns from it to the two others until he has acquired their languages: and what he does impart then will be knowledge infinitely less perfect than that which they might all of them attain by a glance at a drawing made from nature. Conceive the most laboured description of some animal or vege-

table tissue as it appears under the microscope, and compare the effect of such a description with that of an accurate drawing as it addresses one who has been an accurate draughtsman of anything in nature. Or compare the microscopic appearance itself, as it affects an untrained eye incapable of seeing more than so much pattern in outline, with the effect on the eye of the draughtsman capable of translating, so to speak, the perspective and the various intensities of outline into solid correlated structure. The difference is so great and so important, that if only this exact training of the noblest of our organs were made an indispensable part of education, there would follow an imperative call on the part of the so-trained student for greatly increased accuracy in all scientific delineation. The compilers of scientific text-books would have to be more careful and exact, and science would advance not only by the teacher but by the taught.

But this instance of the stimulus to improvement being administered from below, recalls us to a deferred consideration suggested in a former chapter. The methods of teaching drawing and versification were compared, and one of the examples adduced showed a graver delinquency in the teacher of the former than in a learner of the latter art. Moreover, the trespass of the teacher was past correction, while that of the pupil was at once to be corrected by resort to critical authority. But now that we have arrived at that point of the enquiry when it appears how the learners of critically true art would and must supply a corrective stimulus to the masters of science, we see how hopelessly untenable would be the usurped position of

the so-called drawing-master, whose status has been maintained simply by the absence of a critical authority, whenever such critical authority should come into possession of the pupil !

But here I must not mislead my reader to infer that I have any faith in the efficacy of an appeal to the many on account of their multitude solely. Just now such an appeal would be fatal. They have not had the truth of this matter planted amongst them : it would be a cry for the specious and the false. But take away the false and substitute the true, and truth will increase and multiply, and develope new and precious forms, just as falsehood has multiplied and developed her monstrous varieties. How the true is to be got in, and the false to be got out, will be our business to discuss hereafter : but I would at present only point to the absurdity of expecting the hard-worked classes, with neither time nor motive for investigating the matter, to stoically withstand the temptation of having their children taught an useless but specious art of drawing for a few weekly pence paid over to the Government school, when the parents of Collegiate schoolboys succumb to the selfsame delusion. We all—it is national—like quick returns for money laid out ; and the Government Schools have stultified their mission by offering (in their eagerness to have the scheme pay) both true and false instruction at once, and not refusing money for either. I contend that it is wholly excusable in these poor people to confide in the implied wholesomeness of both sorts of instruction, and to take their choice when it is offered. And then if they follow their inclinations' bent, and

decide for that which, to their ignorance, seems to promise the quickest return for their poor weekly investment; wherein do they differ from the Heads of departments, except in their degree of ignorance? But to go back now to our subject, the immediate uses of teaching true art.

We have seen how the attainment of nearly all branches of physical science is facilitated by the sense of sight aiding the efforts of mind: but there is an aspect of this coöperation of sense and intellect which has not been noticed. When we have described in words anything, say a tissue, as made up of *hexagonal cells*, or *fibres*, or *lacunæ*, the notion of such tissue is final; we go away to our occupations with this final notion in our heads, and we may, if the mind is stirred by kindred impressions, receive apposite suggestions leading on to further deduction; but no farther induction is possible, as we cannot increase our data: whereas when the thing in question, or an exact drawing of it, has been seen, we may have not only all those notions the description supplied, and which (observe) *had been derived from a strictly limited acquaintance with the thing*; but we have moreover the image or idea remaining in the memory and open to further exploration, (as it would remain in the memory of him who furnished the verbal description, and give him an advantage over the reader of such description). The eye sees the known and the unknown both; the mind too is conscious of the latter, but conscious of it as something unexplained, as that which may eventually be less startling to, and incongruous with, the mind's course of action than at

present: and so, in dreams, when the outward world (with its stimuli) is absent, and the mind's action accordingly modified, other than it was hitherto when some anomalous appearance was received through the organs while awake, it may now chance that such seeming anomaly will accord, fall in with the dream-state sufficiently to make one step in progress to that familiarity which we call knowledge, understanding, &c.; and hence discoveries reveal themselves in dreams.*

Now it is because in all physical phenomena every unexplained or unaccountable phenomenon has to be conveyed to the mind through the sense, and has to remain an unexplained image with the mind for a season, long or short, before it can be comprehended by the reason, and because *physical* science stands still so soon as it becomes a reasoned statement instead of a sense-subjected fact; that all means and appliances which keep the *fact* in view must be sought to the uttermost, and actively employed where they exist.

That accurate intelligible drawing holds the first rank among such aids is sufficiently obvious to the understanding of all to require no elaborate evidence: but it is an event fraught with no little significance, an unmistakable symptom of the setting-in of a new current of thought on this subject, and of what novel functions may presently devolve on graphic art, the fact of medical and other public examiners now be-

* The privilege of thus supplementing the waking intelligence by means of the sleeping, or at least dreaming, consciousness, appears to be vouchsafed mainly, if not solely, to minds that have a self-exploring tendency, a faculty of introversion.

ginning seriously to ponder the advantage of conducting examinations through the medium of drawing as well as language. It is argued, for example, with irresistible reason and practical feasibility, that the medical student shall evince his knowledge of structural and topographical anatomy by drawing the tissues, the organs, and their relations extempore upon paper, as well as by the mere answering of questions—questions which the “grinder” can forestal, and prepare the examined to answer. And they go on, these bold innovators, to urge, that more convincing evidence of knowledge can be obtained, on all matters conversant with form, by means of a few strokes of the pencil than by an hour’s verbal examination. Nor can it for a moment be questioned that language is one of the worst means of expressing form, while drawing is incomparably the best. For though it be inferior to modelling in behoof of solidity, it is greatly superior in point of rapid execution and a facility for exhibiting the relation of parts, which, often underlying one another, are only to be shown by faint or dotted lines.

Before passing to other practical uses of drawing, we may observe, first, that in case the mode of examination just referred to should, as is very probable, be adopted, drawing will be to the medical student as indispensable as Latin: second, that even now the student who can draw has the means of embodying the results of dissecting-room experience, of carrying away in duplicate the illustrations of the lectures he attends, and of elucidating his notes of surgical cases: advantages which, *cæteris paribus*, must enable him

to distance in the race all competitors who lack such rapid and efficient means of study: third, that these advantages are in no wise diminished when he enters on his practical career: and, lastly, that it is simply impossible to acquire this art after the student's life commences. Early deficiencies in Greek or Latin may be, and have been, supplied by judicious "coaching" sufficiently to meet all demands of examination; but an early deficiency of eye and hand training cannot be supplied by that means, or by any means whatever.

It would be idle to follow in detail all those vocations wherein drawing is equally or even more important: as in civil and military engineering, for instance, where it is simply indispensable; in scientific voyages of discovery, where it is equally so; in all branches of natural history, where it is in special demand; in manufacturing establishments, where it is variously employed both in designs for textile fabrics and for patterns of all kinds; in upholstery, cabinet-making, cutlery, and for the various and all but infinite requirements of the silversmith, watch-maker, jeweller, and the maker of musical, astronomical, surgical, and mathematical instruments: not to mention its value to the potter, the turner, the decorator, the mason, the carver, the framemaker, and almost every manufacturing tradesman.

Although it will be seen that the degrees of proficiency called for by the various vocations enumerated must be almost as various as the vocations themselves, yet it will also, on closer and deeper view, be discovered that the aptly-called "drawing-master's drawing" will not answer any the simplest of these

demands: for surely if one who has gained prizes for his school-drawing cannot delineate accurately the figure of a chair or a table, or of a desk that may stand upon the latter, he cannot answer the demands of the humblest occupation cited. The cabinet-maker, the carpenter, disclaims him. For here let it be well understood that it is not quantity nor variety of art-knowledge that is insisted on or stipulated for as a condition of success; but it is a perfect and critically truthful attainment of some quantity however little: so that if the scholar has learned to draw faithfully only the 'desk' and no more, he has accomplished a success; he can answer present demands in a limited capacity, and is moreover in a condition to judge his future performances by a critical standard of truth, to increase his proficiency by practice, and to answer an increasing demand. I contend that he should be taught here as he is taught in other things, where success is sincerely contemplated; that he should advance step by step firmly, not taking a second till the first is made sure and perfect. Would any honest school-teacher let a boy proceed to the second declension of nouns while he hesitated and blundered in the first, then dip him into verbs here and there, and presently (apprehensive of parental discontent) pass him on to syntax and scanning? Yet this is precisely what the drawing-master does when he passes on a pupil from blunder to blunder, and, finding him accurate in nothing, puts paint-box and brushes by his side with as ludicrous (and as genuine) an expectation of his succeeding in colours as the mythic American had of his dog succeeding in racoon-hunting

because forsooth he had proved good for nothing else. We well know how the story goes on to tell that the originator of this theory was at least sufficiently convinced of its truth to sell the dog as "first-rate for 'coons"; and that when the purchaser remonstrated, averring that the brute did not know a racoon from a sheep, his late owner pleaded the plausibility of the theory, but was obliged, notwithstanding, to refund the purchase-money: nor is there any version of the story to record that he disputed the point, contending that the dog's performance was satisfactory, inasmuch as a sheep was indeed a *professional rendering* of a racoon, and "in the eye of the hunter" ought to be one. Yet substitute for the last phrase "the eye of the artist," "tree-drawing" for "racoon-hunting," and "scribble" for "sheep," and we shall appreciate the daring originality of the drawing-master's customary answer to anyone who ventures to think that "the idle dog, his son, has not learned to know trees from scribble," or at least to express on paper his knowledge of the difference. "Artistic rendering," says Gandish; and this is one of the most daring pieces of originality (or original pieces of daring) that will signalise this age in psychologic history (whenever such a book shall be written). Most daring, most original, but not the most wonderful thing we can show, which is this: A modern utilitarian Englishman (born of a nation of shopkeepers) contented to take Mr. Gandish's word; to believe that a tree is a scribble, a sheep a racoon, in fact; and paying his money that his son may think the same, and render artistically or indifferently whichever of the four he prefers!

But, to proceed,—what is there more absurd in this very absurd story, than the monstrous and mischievous conceit that a boy, who has not yet attained to draw with accuracy a single leaf or a cast of one from nature, should therefore be qualified to encounter a task so incomparably harder as must needs be the drawing of a tree or a landscape? But we do not stop here in our romance. It is true, our bold experiment has brought but fresh evidence of the learner's incapacity—'learner' is however a misnomer, for he learns nothing; he is discountenanced, compromised, impatient, thinks he can paint possibly (the racoon theory);—and we actually entertain the suggestion, and address him to an enterprise a hundredfold more arduous than the last, and a thousand times more hopeless than the first, of painting a veritable landscape!—That he can, if the paper is sufficiently moistened, lay on a wash of blue for sky, and another wash of green for fields, is unquestionable. The pump, the stile, and the haystack are faintly and withal cautiously adumbrated by him (and the master), and then the production is taken home 'to mount'—*i. e.* to be made, to be manufactured according to the time-honoured laws of drawing-master's art, and is, in vacation, presented to expectant parents, who wonder a little at the blue and the green, but, satisfied with the gipsy's red cloak, and being told moreover that it is all very right and clever, proceed to frame and show it off.

Now let us turn to the hero of this young "soul's tragedy," the poor little praise-bespattered urchin: and do not, man, do not regard this thing indifferently,

holding it of small moment whether a boy get a little more or less than his due; and whether his a child's estimate of the judgment and justice of his elders is a little higher or lower. Have we then so far forgotten our childhood as not to be aware how then we were of quite as much importance to ourselves as we are now?—nor to recall our keen sense of indignity and injustice? our instant detection of undue severity or undue caresses on the part of the wayward giants watching over us? our shrewd observance of what we counted warnings? and our logical laying-up of resolves to evade, or defeat, or meet, the danger such warnings threatened?—And the danger was as terrible as ours is to-day. To say “children have no real troubles” is most childish, the ignorance of selfishness. Has a full-grown criminal under sentence of the lash no trouble? Would any of the “real troubles” of business trouble us quite so much as the knowledge of a flogging, deserved or otherwise, to be administered to-morrow by a giant nine feet high? “The shame and the disgrace would overwhelm us, and these the child”—do not say—“*cannot* feel” while we stand him disgraced with his red face to the wall! Only it is “so ridiculous” this argument,—and will, no doubt, ever remain so while our hopes, fears, pains, and pleasures are “so much more real to us than a child's are”—“to us” unquestionably. For that bank-failure blighted all your cherished hopes and ruined your future prospects, while the child's disappointment at not seeing the pantomime—“yes, blighted all his childish hopes—only it was for his future good: and he had a parent to care for that,”—which we grown-up Christians have not?

Not admitting this, however, a digression, but a most important part of the subject, we proceed.

The boy who finds himself lauded and rewarded for what he knows is not his own work, and who, in the fact of the most easy and heedless of all his tasks, obtaining much praise and reward, detects an advantage in idleness and deceit; the ease of practising deceit successfully, and the fact of a tutor's complicity, must be an unusually constituted creature if he do not profit by the experience! How he will, and does, profit, and how this bad element in our school-teaching developes itself in "traits" and "propensities" which "*can* have no connection with anything so remote as the drawing class," I shall not just now stop to enquire: but, having closed an enquiry into the direct or immediate uses of the true teaching of drawing, it seemed only fair to admit that the other kind* of teaching

* "The other kind of teaching." What this is in its plenitude and perfection it might be difficult to define; but a few salient points may afford a fair general idea. First, It is strictly demagogic, relying on popular credulity. Second, It addresses two popular weaknesses, that of "showing off" our children, and "setting off" our rooms, by (Third) promising brilliant cheerful pictures to be mounted, framed, and hung up. Fourth, It utterly ignores proportion (I have seen and compared with the originals finished shaded copies where one dimension has been doubled, another trebled, and a third halved; and this under the direction of an eminent professor of "the other kind of teaching"). Fifth. Its perspective always abounds in supernumerary vanishing and measuring points; possesses independent horizons, a roving centre of vision, and a free unconstrained station-point. Sixth. It is not responsible to optics for the projection of shadows, and sometimes insists on objects showing a shaded face to the public and standing on the ground without a shadow.

Though these are a very few of its peculiarities, they are such as may be readily established by a rule and compasses, if necessary, and are so far unerring exponents of "the other kind of teaching," the constant characteristic of which, however, is an aspiration and resolution to colour, at any

may have uses also which a boy's ingenuity will discover.

I now propose to investigate the *mediate* or *indirect* effects of such teaching as I have advocated, which, as before stated, does not make demand for more time nor more teaching, but for true teaching, whatever its amount, and true progress, whatever its rate.

In tracing the effects of this teaching as they manifest themselves in new channels, I will, in order to avoid any over-estimate of the amount of work done, begin by supposing the pupil thus taught to have done nothing more than a careful copy in outline of a single leaf.

Let us consider his new experiences, his consequent impressions, and the subsequent effect of these.

The first thing that an English schoolboy does in this case is to make very short work of the task before him, and to "run round" his outline about as quickly as he runs round his bases in the playground. Of course it has all to be rubbed out, for being much askew, and too wide or too long. So he tries again, and affirms that this time it looks to him perfectly correct. Now then comes the critical test. You have seen him, from the bowling-crease, deliver the ball duly for the wicket, and have no great misgiving

cost. It is true that University College and a few large schools have made drawing a dangerous reality by sincerely believing (with such authorities as the old masters and the Royal Academy) that drawing is the grammatical basis of art, and by excluding colour altogether. Yet, seeing that the majority, whom the "other kind of teaching" addresses, know nothing about the old masters and Royal Academies, the amateur colour-shops and small frame-makers are not as yet possessed with panic, nor in imminent danger of dissolution. *Absit omen!*

about his "seeing straight." You lay your pencil along the midrib of the leaf, and he tells you at once it is askew. He now sets the midrib straight, dividing the leaf into two lateral halves, and detects, without further help, that these are too narrow or too wide, as the case may be. Next, squares are called into requisition to establish the proportion of widths to heights : and he finds, to his surprise, that he possesses a power in his eye of critically demonstrating such errors without the help of admeasurement. His first impression undoubtedly is that the drawing class will be no vacant hour divided, during the intervals of your visits, between cutting his name upon the desk and talking to the boy who sits next him. He will see, on the contrary, that drawing also means work, may resist at first, but will finally fall-to. So the all-important preliminary is accomplished : that value and respect for his study, without which no student can work, we have secured him. But what else ? Will he not presently take up his pencil and put to proof the perpendiculars of his fellow-pupils ? Will he not submit all their productions to the process of bisection, and the critical ordeal of squares ? Will he not have learned that as the proportion of sides to hypotenuse in Euclid's ' forty-seventh ' is enunciated through the square, so the square is in fact the fundamental standard of proportion ? and will he not wake up to a consciousness of correlation and harmony in all his studies, with a novel delight and a peculiar interest akin to what we ourselves feel on finding two friends, we thought strangers, are not strangers, but very old acquaintances ?

But all this is making him a critic, not an artist? a correct, but at most a mechanical draughtsman? Even so. We teach him to criticise, not dogmatize; to render a reason for his criticism—to say, this is wrong not on my authority, but on the authority of the square. Nor do we try to make him more than a correct draughtsman; the question of that being, or not being, mechanical, not in the least affecting us. We have seen that “the other kind of teaching” does not make a correct draughtsman: does it, or can any teaching, make a genius? Finally, is it more desirable that the majority of people should be artists or critics? artists even equal to their teacher the drawing-master, or judges able to convict of error, and reject such public works of art as we *select*?

We will turn to the progress of our pupil who has acquired the fundamental principle of proportion, a respect for his new study, and the interesting secret of its being related to geometry. Thus he enters on his second lesson, and attempts to draw the outline of the leaf, its lobes, and irregularly sinuated margin; with what success we may pretty well conjecture. The lobes on the left hand are two high for those on the right; neither has the principle of proportion exerted a sufficiently strong influence in determining their various sizes: the basal lobes are certainly too big. Disregarding this, however, for the present, you bid him draw the two great lateral veins that run to the points of the two middle lobes, and to observe how they make right angles with each other, or angles of 45° with the midrib, angles which he finds it impossible for his veins to make until he lowers the

points of their lobes. Next you call his attention to the veins of the basal lobes above; how small they are in comparison with the last, and how, as they supply the nourishment of the lobes they pertain to, these last must be proportionably smaller also: and you confirm this by the angle of the veins requiring a raising and shortening of each lobe, more especially that on the right, which a horizontal line shows to be higher. Then you point out how the prominences and depressions of the sinuated margin, which he has drawn very much at random, are all duly expressed and intimated by the branch veins distributed to or between them; and how perfect the consent between the form of the outline and the swerving this or that way of the great central vessel. But your lesson is ended: and although he has made a much better outline-semblance of a leaf than he ever expected to make by help of his mere hand and eye (for you have not done a line of it yourself), he is convinced that to draw it in the perfection of its infinite harmony (which you tell him of) would be a task beyond him or his master. But what will be the indirect effect of this teaching? how will it influence his manner of thought and feeling, his estimate of certain other things? Will it not breed in him a faith that there is an inexhaustible field of study in all natural things that live and grow, when a leaf (hitherto valued by him mainly so far as it contributed to a bonfire) has proved so hard for eye and hand to imitate? so full of wise sums in the Rule of Three? For so sure as you laid down the proportion, "as is the vein to its lobe, so is the midrib to the whole leaf," will he repeat such

piece of wisdom to his fellows. Not a lesson in natural history does the same thing by any means; the difference being that here he has measured his strength against the natural object, feels a flattered familiarity, a bond of union with the half-revealed mystery. And when you presently initiate him into secrets of perspective-modification of these proportions, and he learns how quantities vary in respect of the relation they bear to himself; and you let him find out for himself how equally illuminated sides of an object appear unequally light when he views them under unequal angles; how the light rebounds in precisely the same manner as the ball he plays with; how straight shadows become bent when they fall on a curved surface, and again appear straight as he alters his point of view; how the sky-line stoops as he stoops to the level of his eyes, and rises again to the level of yours (two feet above his head), as you hoist him up to observe this;—will he not wake up to new interests and a new sense of a connection linking far-off things together?—to a more friendly regard for Euclid who has somewhat helped him here, to a feeling of things working together, to a more patient and hopeful contemplation of things about him, to an inkling of these being other than they seem, and to a faint beginning glimpse of his own mind? To talk these things philosophically to him is a wordy nullity and another thing. To learn, there must be action with perception, and enjoyment of power with action. Now art is conversant with hand and eye, main sources of power, pleasure, and perception. The eye is a great gateway of knowledge, but what addresses

it goes in a stranger if the hand has no part in the welcoming.

But we have been considering the (indirect) effects of a very limited teaching, and must next look into the process of a somewhat more extensive study, likewise with a view to its indirect or mediate results, only first pausing for one retrospective comment, which is this. The effects we have so far arrived at are dependent on, and solely derivable from, a critically exact mode of study, one, in fact, similar to that which the learner has been accustomed to in the acquiring of other kinds of knowledge, and one consequently fitted to address his mind intelligibly because congenially; to induct him to a new pursuit by a method not new to him, and to make it no abrupt and alien innovation, but a confident onward progress from former pursuits. Deduct one atom of certainty from the process, and there will be that atom less of certainty in the result. Let him draw his leaf veins hap-hazard without design, and nature must be, *to him*, hap-hazard without design. Let him intend his mind upon factitious objects, pumps, stiles, boats, and mile-stones, and other of man's handiwork, and man's handiwork will attract him more than nature's. Let him deal with light and shadow loosely, without law, and to him the light of day will have neither law nor lawgiver.

But if man's eye is so constituted, so in conformity with the structure of all created things as to present to us (by a proportional differentiation) all that intimate relation, co-adjustment, and subserviency which subsist the series we call nature; if its nerve-strings

are so ranged and strung that the light (a faithful minister authentically commissioned to effect this) still traces its outlines with no error, omits no delicate tint nor faintest reflex, lest the telling of the truth may be impaired;—shall the art best gifted for that truth's telling, trifle insensate with its trust, be mute, or utter idle nothings? Shall we receive the true image in the brain, and utter it falsely with the hand?—take light's truth, and make the light a liar?

CHAPTER III.

MEDIATE EFFECTS OF EXACT ART, AND ITS TEACHING.

IF we come now to look into the process of instruction that will indeed result in a real knowledge and power of drawing, there will perforce present themselves for examination the constituents of an extensive subject-matter; all that varied range of objects which would constitute the learner's field of study, and which, however restricted by other demands upon his time, would still be very various and extensive. Bearing this necessary restriction in mind, I shall confine my examination to such objects and such amount of study thereof, as I know to be possible and practicable; examining these less with a view to the immediate artistic result than to that indirect or mediate effect which has been already glanced at: the difference between this and the former consideration being, that whereas in that case we contemplated the sure effect of a *minimum* amount of true unadulterated teaching, we shall now try to trace what certain consequences attend on an equally exact but more liberal range of study.

And seeing that the structure we now propose to raise is destined to rise higher than before, the founda-

tion should be deeper in proportion; and we accordingly begin with lower and more fundamental forms, the cube, the sphere, and the cone—not on paper, however, but solid.

That these creatures of geometry are, in a boy's estimate of things, a dry unlovely generation, is clear enough: but anything to touch and handle is better surely than those horizontals, uprights, and diagonals that stand, lie, or lean in the first sheet of elementary drawing-books, followed by a circle, an oblong, and a square. Conceded your school-boy does not affect a circle as it figures in these books, or in Euclid even: but has he the same aversion to a round solid semblance of a cricket-ball or a sugar-loaf? the former of which he must trundle and poise by way of test.

There is no concession of truth in all this. The cricket-ball is a very good sphere, and the sugar-loaf a "right cone." Moreover, you promise the privilege of shading, and hint of a secret to be divulged so soon as the outlines are perfectly accomplished. This is done, and lo! the cone opens into sections. It is not a pleasant subject to speak of these conic sections, with the truth full before your face that thousands of educated Englishmen are born, live, and die without knowing what a conic section is; at best, without knowing one section from another. In any mixed company of twelve persons (not professionally mathematical) we do not, on the average, find four who can tell wherein hyperbolas differ from parabolas, or ellipses from either of these. Now this is a very moderate computation of the extent of a deficiency no one blushes to acknowledge; a state of things, it

may be said, for the mathematician to lament: but in what way is it connected with drawing? In much too remote a way *at present*, I think it might pertinently be answered: whilst it is precisely to the mathematicians that this part of our subject brings us. Let us take twelve mathematicians, and ask, not if four, but if one out of that number be sufficiently familiar with the hyperbolic curve to detect it in a Greek moulding, or in the outline of some vegetable or animal form, where it indwells and whereon it confers peculiar expression. He has undoubtedly studied the generation of this curve, and will solve any problem conversant with axes, asymptotes, conjugates, and the like; but has he familiarized his eye with the concrete as he has his reason with the abstract? He will answer unhesitatingly, no. He can make all the calculations he requires without the assistance of eyes; and cites the case of Saunderson the blind. He smiles indeed at the ignorance of his science which the putting such a question betrays. And, as a mere mathematician, he is right. We do not allege any shortcoming in that restricted capacity; only *he* is not the mathematician to render certain peculiar and important services to some other arts and sciences, as the Greek mathematician undoubtedly was. With the latter the conic sections were something besides an abstract intellection; they were a feeling, a sensitive experience. And he so possessed his disciples with *each* kind of knowledge, that they could recognize these curves not only in the spirit of geometrical truth, but in the flesh of fact also, whether informing the contours of an amphora, the echinus of a Doric

capital, or the restrained spreading curve of the shoulders which Phidias found worthy of Theseus.

Why the Greek selected the conic section, and principally the hyperbolic, employing it in his architecture, sculpture, utensils, and even armour, may be a question for future discussion: but the mere fact of his doing this with that discrimination and unerring precision his works evince, at least bears witness to that practical familiarity with, and recognition of, the thing in its *physical* existence, which we do not find possessed by ourselves. And it is this intimate sensitive familiarity with the fundamental and characteristic forms of nature, that made Greek art what it is, and emphatically entitles it to the designation "classic." For what is this much talked-about, much wondered-at, mysterious, classic element, which seems so unattainable by us moderns, but an inevitable sequence to the logically stepping onward and upward from a firmly-based well-ordered foundation? If we began logically, orderly, classically, by studying the elements of art, and failed of a classic result, it would be wonderful: but are not our simplest forms, whether in teacups, claret-jugs, furniture, head-gear, or chimney-pots, as innocent of hyperbolic curves as we are? Have we any suspicion of a discretion and propriety of choice attaching to the forms herein employed?—or, rather, do we suspect the existence of any primitive, indecomposable elements of form at all—much less of the natural and rightful significance of such forms?

Why is chemistry a classical science, but because it begins with the elementary results of analysis? What the difference between learning music classically

and barbarously, but the difference between beginning with the gamut and exercises, and skipping these to play falsely some showy fantasia. In these cases we can all see the indissoluble consistency of means and end. How comes it—by what foredoomed baleful cecity—that we are ignorant of the like being true of the sister art? Not surely from acquiescence in the dogma, that it is one thing to understand form, and another thing to produce it: since this doctrine obviously was an effect not a cause of the ignorance. And even if we put this crude utterance in order of march, and admit the truth of the more definite statement that receiving an impression and performing an action are two distinct processes, the fact still remains, that all our genuine knowledge of things results from these co-adapted processes, that all other so-called knowledge is not our own begotten but adopted.

Form, so far as it exists to us, comes in at the eye and goes out at the hand; and until it has travelled this round, however it may be talked about, read about, thought about, it is in no true sense apprehended. If it enters vaguely with no attentive welcome, it comes in dishonoured and goes out dishonouring: we have indeed consummated not the apprehension, but the misapprehension of a most mighty attribute of creation, and we have possessed ourselves not of a chaos without form and void, but of an insurgent misbegot, abortive combination, witnessing no wisdom, no harmony.

I would entertain what enters by the sense of sight gravely, with reverent attention, with carefulness, without haste; and, with faith in a patient analysis,

intend the student's mind first on the simple elementary forms, and familiarize him with these by exercise of hand: answering his questions touching their import by pointing out how the circle and ellipse are more uniform and less complex than the parabola and hyperbola; and how, as all figures are generated by the agency of force, these latter more complex figures are generated by more numerous and complex forces than are involved in the generation of the former less complex figures: pointing out, next, how the higher and more complex forms of creatures, vegetable and animal, are supported by forces proportionally more complex than those forces which maintain the less complex and lower organisms: and, lastly, adverting to the fact of the parabolic and hyperbolic curves prevailing in and characterizing the higher forms of vegetable and animal, while the comparatively simple circle and ellipse are found in primitive cells, globules, eggs, larvæ, animalcules, and the lower elementary and homogeneous vital forms. It is, accordingly, with these lower forms that the student will next have to deal, and the interest attending the delineation of them will increase gradually and surely, and in proportion as they rise to a nearer level with our own position in the ascending scale of life: so that when he arrives at the study of his own human form he will be fitted to entertain so high an argument with increased understanding and becoming reverence; he will have multiplied his self-knowledge and self-respect. Only a gain so gradually arrived at must not be confounded with the new and startling conviction that seizes, elates, and dazzles your adult tiro

in "marvels of nature." The one is a novelty and a transient astonishment, provoking, as it passes from that stage, crude hasty theories of creation and novel notions of development—growing more grotesque and wayward as the first sense of novelty is felt to be escaping. The other is a revelation of too slow a growth to be a wonder or novelty; it is one which has not laid any sudden hold on us, but which, on the contrary, we have gradually laid our hold upon, felt firmly our way to, and are not apt to be "run away with." "Things are in the saddle and ride mankind:" only when, instead of us grasping well the things, the things have taken hasty hold of us. And this grasp, this mastery, is not got without the putting forth of power, without an ever-renewed measuring of strength with each new incoming experience of the sense. For as "we are not wholly brain," so there are true convictions *not wholly of reason*, but partly fruit of feeling and of action. And when one sees each impassive Professor of Development balancing the probabilities of a monkey origin for humanity, demurely placing in the scale hippocampi and corpora quadrigemina, it will occur to us to ask why they confine their thoughts to that one kind of evidence, settling all by the Encephalic neurine and development of neural or hæmal arch? The answer is, because they know about these things exclusively—the brain and animal mechanics. For had they studied with eye and drawn with hand the forms of birds, flowers, palms, and panthers, and the ineffably fairer form of man and woman; they had found out that beauty has also a significance: that, if likeness is the

evidence of kindred, an ape, which is less beautiful than a panther or a horse, is, so far, less like man and less akin to him than is horse or panther. Or had they studied and imitated the beautiful in sound, they had discerned how the ape, while nearing man in bones and muscles, has wandered away from him in behoof of what they hold the most important human faculty, that of speech, which would make pyes and parrots our immediate progenitors; while thrush, nightingale, and skylark approach man as a music-producing animal so as to extinguish the claims of all mammals. To observe a gradient of structural resemblance from the lowest vertebrate up to man is scientific; but upon such observed facts to found a theory of actual development of each vertebrate into the next above it, each to be produced in its totality from nothing but that one below it, help of time, and material conditions, is unscientific, till structural and functional progress are observed to be coextensive. For surely function is no less a test of progress than structure is? and if a vertebrate, in its supposed progress from beaver to ape, has eliminated its caudal vertebræ and so far moved nearer to human *structure*, its concomitant loss of house-building faculty removes it so much further from human function. Again, if the beaver be *structurally* a more human vertebrate than the lory or blackbird, by possessing maxillary teeth and wanting the lower larynx of these last, is it not *functionally* less human in wanting their faculty of speech and song? And the ape, with its immediate *structural* proximity to man and its functional remote alienation from him, in its gross resemblance to human

mechanics, and gross want of resemblance to function, faculty, and attribute, characteristically human, such as articulate, musical, and rythmical, utterance, gracefulness and dignity, and beauty of form, colour, and proportion ; is it not, in deficiency of all these, rather an instance of the inability of structure (as mere anatomy conceives of it) to confer such faculties and attributes on its vertebrate possessor ?

To one not pledged to a foregone conclusion, that structure is the efficient cause of function, and that our estimate of structure is commensurate with our estimate of function ; to one who moreover appreciates form under presentment other, and, perhaps, higher than the structural ; who regards it not only as it addresses the reason but also as it affects the feelings and emotions, as it satisfies the human appetite for beauty, grace, loveliness, delicacy, tenderness, melodiousness, and the aspirations to benevolence, truth, honour, dignity, and death-defying devotion—to such an one contemplating the near, yet far, impregnable and many-sided face of matter, there come utterances inaudible to a mere student of structure ; utterances which say—

My building is yet secret. These structures that you think you see, what are they ? What is it that you know of them, and how ? They are known to you so far as they act on, and work change in, you ; no further. Working no change in you, to you they exist not, and only so far as they exist to you can you discourse of them with reason. All you know of them is just that which they do to you directly or indirectly ; something they perform, a function. Then what you name a

structure is a function, so far as *you* know it: and your seeing a structure is your being a patient whereon this function is exercised; your sense of sight is affected thus or thus. And all that you can reason or think about this so-called structure is, all that you can think or reason about this affection of your organ, either of sight or other senses affected by the structure. But remember that you *know* more than this—more than thought and reason supply; for you know that the sensation is pleasant or the reverse, beautiful or the reverse, awful or the reverse, humiliating, ennobling, dispiriting, or the reverse of these, though you take no account of these when investigating structure: you confine your reasoning to what you *think* this unknown thing structure *may do*, in preference to reasoning on what you *know* it *does*.

So presently you assign uses or function to what, so far as you *know* it, is only function. And first you suppose that a certain affection of your sense (A) is caused by the thing structure—which you may reasonably do if by “structure” you mean a thing unknown. But, next, you suppose that the thing structure affects something else, not you; and, finally, you suppose that the something else, so affected, causes another affection of your sense (B). So that when you experience the two affections of your sense (A and B) you link them together by this process (hanging on three suppositions), and assume that they are *certainly* so linked: you affect to know this unknown thing structure, and what it can do to another unknown thing, which you also affect to know capable of making in you a certain peculiar sensation (B).

Remember now that, when rejecting as absurd the idea that certain colours of birds and insects were designed to give pleasure to man, and maintaining that they are only the remains of ancestral structure once useful but now useless to the possessor, you are going on the last baseless assumptions ; you are denying that they were designed for a function which you know and feel they possess, that of affecting you with pleasure and beauty, rejecting this certain evidence for a series of suppositions grounded upon a primary supposition. You, who profess to take evidence impartially, allow the uncertain to supersede the certain, in your eagerness to dispense with design. But if your suppositions were proved facts, and these colours derived as you infer, would that account of the matter argue that they were not designed to do that which you acknowledge they now do ? Why, again, do you take such pains to shew that these colours *once* had a use ? Not surely to shew they *do* not exist in vain since you say they *do now* exist in vain, but to shew they were once not in vain. But do you not perceive that your zeal is in vain in vindicating the existence of what may never have had an existence ? And why, again, do you hold it more important that such colours should have once ministered to their possessor, than that they should, as you know they do, minister profitably to man ? Not surely to argue that there was an original act of creation (for time and inevitable conditions to further develope) ignorant of certain vain results ? say, rather, to support this theory minus the last inseparable inference (which you have lost sight of) that such a creation implies want of power

and of prescience. But, if even you could avoid this inference, observe the long series of suppositions requisite to place your theory on an even footing with the opposed theory (of an *incessant* operation of means to ends) which holds this footing in virtue of the certain fact that the end is achieved in man's enjoyment of pleasure and beauty.

Until you attain to some evidence of structure being other than a result, it will be safest to regard it as simply nothing more than one; to avoid the perilous experiment of loosely naming it "secondary or intermediate cause"; to compare it with other results, motion, heat, sound, colour; comparing these, again, with others more near to you, pain, pleasure, beauty, discord, harmony. Observe and establish relation and likeness in these, so far as you can apprehend; but do not conceit yourself that structure, which is, as you have admitted, only manifested to you by a certain affection of your brain, will ever tell you anything about that brain's causation, or convince you, a reasoning consciousness, that you were gradually developed from it. Is it not sufficiently speculative to maintain that what you name structure I have variously modified (you say "developed") in fish, reptile, bird, beast, and man? To assume that the modification is gradually upwards, each step a nearer likeness to the human,—to note and establish these similitudes, observe this uniformity of plan as you observe uniformity of style and one pervading character variously modified in the various works of one human author,—to order and class the related varieties in my works as you do in his, not thinking it

“wonderful”* that they should be so related and susceptible to classification whilst you refer them to one and the same origin. Can you not consent to deal with me as liberally? to concede me as much originating faculty? and, as you do not argue, from their relatedness and graduated resemblance, that his

* “It is a truly wonderful fact—the wonder of which we are apt to overlook from familiarity—that all animals and all plants throughout all time and space should be related to each other in group subordinate to group, in the manner which we everywhere behold—namely, varieties of the same species most closely related together, species of the same genus less closely and unequally related together, forming sections and subgenera, species of distinct genera much less closely related, and genera related in different degrees, forming sub-families, families, orders, sub-classes, and classes. The several subordinate groups in any class cannot be ranked in a single file, but seem rather to be clustered round points, and these round other points, and so on in almost endless cycles. On the view that each species has been independently created, I can see no explanation of this great fact in the classification of all organic beings; but, to the best of my judgment, it is explained through inheritance and the complex action of natural selection, entailing extinction and divergence of character, as we have seen illustrated in the diagram.”—Darwin’s *Origin of Species*, pp. 128—9.

While Mr. Darwin’s theory refines upon the vulgar idea of creation by economizing the Divine act, and referring it to a period incalculably remote, it involves the possibility of natural development proceeding without divine interference or impulse, and this even if the first cause were extinct. A supposition more illogical than that of special creation: since if the existence of a thing, a monad, demands special creation, the existence of another thing, its development, should make the like demand, and so of each successive development. By the Realist theory, there exists matter inert, of itself incapable of change, motion, or development, and which, while it moves, changes, or develops, presupposes the continued operation of agency immaterial, since once gifted to move itself, it is no longer matter. By the Idealist theory (Berkeley’s) all change, and therefore development, is the operation of divine act upon the mind. It is somewhat strange that no one has called attention to the fact, that Mr. Darwin’s theory, which admits the divine (though remote) origin of nature, yet antagonizes, as I have shewn, the doctrines of both Idealists and Realists who admit of a divine origin.

works veritably begot one another, spawned and hatched in course of time with no new effort or interference on his part, but simply breeding, battling, exterminating amongst themselves, indebted only to time and friendly or unfriendly conditions for their progress to that more or less perfect state in which you find them; as you do not, in his case, give time half the authorship, and do not stumble at difficulties about "independent creation"; cannot you likewise allow my claim to a direct authorship in each work? and refrain from tracing my design to one primordial effort, a nucleated cell; my structure to time's evolution of this cell; and my functions to a necessary resultant?

It is to this tenor, I take it, right or wrong, that one who has studied nature, not only as she addresses the reasoning intellect, but also as she appeals to human feeling and emotion, will interpret her utterances on the hard and deep question of creation, a question which natural philosophy now regards perhaps too exclusively under one aspect,—approaches too much from one side? He (the student I have supposed) would doubtlessly be subject to the self-same human weakness which we all share in common, that of measuring all things by such standard of truth as his own peculiar personal experiences have possessed him with: only I submit that a standard of truth grounded on a many-sided survey—on a view of not only the mechanical and structural, but likewise of the beautiful and sublime, the delight and awe impressing properties of natural forms, would be a standard of truth so much the more comprehensive

and relatively perfect because conversant not merely with the rational but also with the emotional and moral aspect of humanity, and therefore well fitted to supplement and rectify a standard exclusively grounded on the more material properties of nature, such as speak solely to the reasoning and inquisitive faculties which are prone to grow overwise and arrogant—

“For she” (Science) “is earthly of the mind,
But Wisdom heavenly of the soul.”

and the student of both aspects of nature will acquire a less cramped and ostensibly logical, but a much more universal standard of truth by submitting himself to more than one influence of the material world, and by thus becoming less “wholly brain,” and more wholly man.

But we are anticipating, though not without design. The life-enduring stamp which characterizes our future views and opinions is taken, or rather given, somewhat early in life; neither do we deliberate and select at this juncture. The individuality of thought and feeling educed by early applied surrounding stimuli grows up to a certain point and presently becomes, or amounts to, a consciousness, an inward recognition of “selfness,” after which, though our opinions themselves may change or be modified by circumstances, our mode of forming them will not change. So it happens, when the age gets full of one sort of fact and one sort of faith, these constitute the surroundings and apply the Self-evoking stimuli of the young who have arrived at this critical juncture. Now it is one of the drawbacks of mental progress that

this is so,—that it brings us to such a state. For there is nothing more manifestly a bar to progress than a prejudice; and this is beginning with a prejudice, starting the young soul on its journey with a tendency to look at one side of things, that side of things which all eyes are looking at to the exclusion of many other sides, which, if freely examined by our next generation, may be found pregnant with new forms of progress. Just now it is emphatically the Material Side of Things that all eyes are fixed on and all faiths centred in,—“great contrivances of power,” in the language of a great poet characterizing the spirit of this age. Therefore, the eternal truths, the parents of all discovery and all knowledge, are finding less favour with us, and having less of our confidence than the tangible material outcome of these truths. Nay, we are in some danger of starting with a new foundation of first principles, and in place of truth, honour, religion, generosity, patriotism, poetry, and philosophy, to put an unquestioning faith in commerce, chemistry, locomotion, velocity, electricity, and the might of material agencies—good servants questionless, but bad masters; prepotent eidola as lords of thought and motive, and which, as such, admitted into our seminaries now, will as surely be masters of the forthcoming manhood as “the child is father to the man.” We shall therefore do wisely and faithfully, while adding modern science to our curriculum, to be sure that it indeed is, and operates as, *Natural Science*, and not as a partial and onesided manifestation of it, constraining and polarizing all mind in one direction;—do discreetly and well to see that we temper this

tendency to physics and mechanics with the modifying influences of knowledge not physical, the more liberally developed sense and perception of the higher attributes of nature, beauty, grace, harmony, and the endearing aspect of humanity. Hard no doubt for Science, who

"Leaps into the future chance,
Submitting all things to desire,"

to pause in her "onward race for power;" but the poet and sage who speaks thus, and "bids her work prevail, as heartily as any of us, warns us also that "she is the second, not the first." And another warning voice, after uttering this pregnant proposition,

"For I say, this is death and the sole death,
When a man's loss comes to him from his gain,
Darkness from light, from knowledge ignorance,
And lack of love from love made manifest;
A lamp's death when, replete with oil, it chokes;
A stomach's, when surcharged with food, it starves,"

exhibits unerringly the over-confident pursuit of physical power resulting in the death of human progress, thus:

"When man, appalled at nature, questioned first,
'What if there lurk a Might behind this Might?'
He needed satisfaction God could give,
And did give, as ye have the written Word:
But when he finds Might still redouble Might,
Yet asks, 'since all is Might, what use of Will?'
—Will, the one source of Might,—he being man
With a man's Will and a man's Might, to teach
In little how the two combine in large,—
That man has turned round on himself and stands,
Which in the course of nature is to die."

And is it not a fact of significant import, that men of profound research and observation, who have in

them this intellect, will, and devotion to a cause (scarcely a result of self-protection, or self-agrandizing motive), should discern the cause of these their soul-belongings,—the basis* of human psychology, in a primordial cell and a multiplying self-selecting power inhering in it to be evolved through the agency of time?—their immortal minds too intent on material structure to reflect that this *time*, which their philosophy invests with a moiety of creature power, is exclusively an attribute of human mind—an idea

* "In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation. Light will be thrown on the origin of man and history."—Darwin's *Origin of Species*, pp. 488—9.

This instructive passage is perhaps unique as an exponent of an intellect concentrated on one aspect of nature. Is the "mental power" which is to be "acquired" to be obtained from any source, or to be created? Of course the same objection which Mr. Darwin urges against any act of creation, not primary and once for all, in respect to matter or body, will hold good against any subsequent creation of mind or spirit (I make the terms convertible to suit Mr. Darwin). Was there any mind or spirit at all in the "primordial form" or forms of Mr. Darwin's hypothesis? If there was not any, then a material monad has not only developed into a man's body, but has also produced his mind and soul. In other words, matter has produced spirit, mind, or soul, without the help of anything but time. But if there was any mind or spirit in the "primordial form," it was, consistently with Mr. Darwin's hypothesis, of course a minimum amount thereof only capable of "self-development." Now if Mr. Darwin holds this latter hypothesis, it would be interesting to learn how he supposes mind or spirit to be reproduced without special or independent act of creation. Ordinary reproduction of visible bodies is simple enough, because we see it going on every day, and are therefore *quite sure* that the Creator has no immediate hand in it: but the question of reproducing spirit is so sadly perplexing, that we shall be obliged to fall back to the first hypothesis, the hypothesis of the "primordial form" having no spiritual claims whatever, and maintain that all subsequent claims of this kind have grown up in process of time, or by right of user.

which, psychologists agree, has no independent essence, and is inconceivable of an Eternal Creator! Surely nothing but the wilful immuring of intellect within the bounds of one domain of science can account for such anomalous conclusions.*

So much for the danger of exclusive views of nature, of neglecting the culture of non-rational, but, in our imperfect state, super-rational faculties. We will now return to the consideration of other indirect effects of an accurate study and delineation of form; *form*—for we have already commented on the delusion of aught less than a professional training making any honest pretension to *colour*.

* "A celebrated author and divine," says Mr. Darwin, "has written to me that he has gradually learnt to see that it is just as noble a conception of the Deity to believe that He created a few original forms capable of self-development into other and needful forms, as to believe that He required a fresh act of creation to supply the voids caused by the action of His laws." If the author of this argument means by "the voids" the deaths of individuals, and thinks there is anything to come out of such an argument, let him consider what a strong argument of this kind might be raised against the Deity's having ever created any living thing. "For is it not absurd to suppose that He would create anything for the action of His own laws to destroy?" might be asked as easily as any other wild and vague question concerning a subject like creation or 'origin' of anything.

CHAPTER IV.

EXACT ART-TEACHING: INDIRECT EFFECTS.

WHEN the student has mastered the primary or indecomposable elements of form which he now finds combined in such simple natural objects as leaves, shells, flowers, fir-cones, fruits, or frost crystals, and has drawn these with careful attention, and consequent pleasure and interest, what will be the results of these efforts and experiences when he is free at his own disposal, engaged with other things than drawing? Is it needful to say that he will regard all that may surround him with just that sort of notice and attention which his training has called into play? He must now infallibly notice the more or less perfect roundness of his snow-balls, as well as the mere fact of their being snowballs. The dead leaves he collects for a bonfire will sometimes draw his eye to their veins, all true even in death: they will be something more than fuel; something, in their angles, of geometry, something of botany, something of beauty, will at a flash be associated, and a memory of the association will be left. Will he not see meadows, cattle, hills, woods, and clouds with a more patient and more careful eye? and, seeing these more carefully and

patiently, will he not find more in them to attract and entertain him? When he heads his fellows up a hill, and the landscape spins round and opens upward, there will mix with the rapture of running some glimmering consciousness of that moving horizon he learned of in the last drawing lesson. You have made him an observer, in short, and can see the beginning of his discoveries, but not their end.

For he will now incline unconsciously to pursue other routes of study than the definitely prescribed ones which are dignified but restricted by the name of this or that science. Observing nature accurately and with a freshness and originality peculiar to youth, he may initiate new modes and methods of enquiry, hereafter to take rank as sciences? for the hard boundary lines of existing science are merely an arbitrary limit, a mark (could we but see it) of a niggardly inadequate entertainment of natural phenomena. The irreconcilable differences of physicists and metaphysicians, of phenomenologists and psychologists, witness the want of a science which shall occupy the position of a middle term, or harmonizing medium; a science comprehending within its scope all the varied capabilities of man. We may not hope to see it, but we may hope to qualify our posterity to find it, by emancipating the young promise of that posterity from some arbitrary fetters of human thought, and by giving all its faculties fair play.

Pending the feasibility of this, let us look at the probable condition of our schoolboy whom we have subjected to such novel discipline as a reverencing of art implies.

He has learnt to see all things that he copies (and you set before him objects representatively various) as things at least worthy of attention, and unfolding interest in proportion to the amount of attention bestowed upon them. Free and at his own disposal, his observations of each surrounding thing will and must be accurate in proportion to the attentiveness of habit his studies have demanded and secured. And the sense that has been most habituated to accuracy will be the medium of most exact observation and intelligence, not only of such objects as have formed part of his study, but also of all objects besides cognized by that more developed sense. And here there meets us a truth which is not seldom unheeded or overlooked. It will not happen that the objects that have been most carefully studied in school will be most attractive out of school ; it will rather happen that the organ of sense in which greatest accuracy has been developed will be found intending itself upon other and alien objects as far as may be removed from the former. But the observation of these new objects will be accurate, for the sufficient reason that accuracy has become an inseparable belonging of the sense observing, just as a graceful utterance once acquired will accompany words anything but graceful. The boy does not object to the exercise of faculty which this or that study demands, for the putting forth of power is at all times (save those of fatigue) rather delightful than otherwise : what he does object to is the subjection to necessity and to the seemingly unescapable presence of the one object of study : therefore it is that, when released from this bond of

necessity, he will, by preference, direct the activity of the said faculty to other objects than such as have really developed it. And hence it follows that such accurate teaching as I am advocating would, in the majority of cases, rather tend to encourage an artistic scrutiny and accurate observation of all things visible than a predilection for the artist's profession. When this truth shall be recognized and possessed in its fulness as it was by the Greeks (whom we indeed copy, but in that *literal* manner which the Greeks would have most despised), then, and only then, will a study of the imitation of visible nature hold its true position in education as singly the most powerful ally of all other studies whatever. For what art or science, with the exception of music and mathematics, and what polite or useful calling in life, is not aided by increased accuracy of eye? and what increases accuracy of eye so much as the imitation of visible things? But when, as we have just seen to be the case, this art not only makes truer the eye of those who practise it more or less, but also induces a more careful and patient observation of things in such as have practised it, however little if only rigorously, its claims to universality are strengthened to an extent which almost constitutes it an unique organon.

Deferring, however, a consideration of these claims, let us take the present opportunity of drawing a corollary from the facts lately arrived at. It was shewn that such rigorous teaching as I have demanded would tend, in the majority of cases, rather to encourage an artistic scrutiny and accurate observation of all visible things whatever, than a predilection for

the artist's calling, and, so far, it follows that such a mode of teaching would rather diminish than multiply the already frightful number of so-called artists, by holding out no inducements to the indolent, listless, and superficial, who, because they have failed in other tasks much more simple, take refuge here in all confidence of success, professing—in virtue of their want of ordinary accuracy and precision?—to develope and make perfect in others that sense which is most of all characterized by accuracy and precision!—This class would be speedily eliminated from the ranks of recognized artists, and we should have in place of it a much smaller number of nature-ordained priests and high-priests of Art's Temple all rightly initiated and with nothing to unlearn; and we should also have an indefinitely augmented number of observant well-informed minds firmly grounded in the rudiments of accurate drawing, and incomparably more capable of teaching principles to the young than are the so-called drawing-masters who now have them in custody. For it needs no great insight to perceive that any liberally cultivated mind, owning exactness of method, and stored with that general knowledge of things required for the understanding of such objects as will furnish the learner with subject-matter for his drawing studies, will, if he have acquired grammatically the regulating principles and exact canons of art, be a much more efficient instructor of the young art-student of whom such amount of proficiency is required, than an inexact half-informed poor sort of creature whom (along with the artist's profession) his scholars have learnt to despise.

Then the question, how to get instructors, in the true and honest school of drawing, when the false guides are fairly got rid of, is by no means a difficult question. The ranks of such instructors will be mainly recruited from well-informed tutors who may choose to add this branch of teaching to their duties; just as many do, in fact, take up chemistry, geology, or botany already. There is always too large a number of scholarly young men sufficiently straitened in worldly circumstances to be ready to embrace any refined and honourable vocation, and none the less so if it should prove lucrative, as drawing deservedly would. As it is, large sums, disproportionately large considering the quality of article purchased, are expended on school and private drawing lessons: we should willingly spend these sums and more to obtain an efficient result, and to feel, moreover, an immunity from such misrule in grammatical and other discipline as Thackeray has exposed in his inimitable picture of Gandish's Drawing academy, with its unauthorized aspirates, false quantities, and mischievously contumacious licence.

I trust, before these opinions spread widely enough to take root *lower down*, that every graduate of the Universities who owns his perfect dole of Greek, and thinks he knows something of the Greeks, will, looking history full in face, ask himself clearly and candidly if he indeed believes that it was to such men as Gandish, with his unhallowed confusion of rough and smooth breathings, that the Athenians entrusted their youth to be taught art? By all means let us have the remedy for this abuse found by the educated class, and not by the class lower down.

That we have not yet, or only just now, begun to think soberly on this subject, is too obvious: we could not deliberately exist in such bad plight! Consider what our position is. Whilst the Greek, whose judgment in art we profess to defer to, held drawing of such high importance that he made it a compulsory part of education, we leave this very branch of instruction in the hands of a class whom neither classical tutors nor artists of repute care to mix with; and, so, effectually bar all chance of amendment and reform. Once resolutely shake off this ugly incubus and begin honestly and healthily, the unnatural obstruction will vanish never to return. The majority of art-instructors will be found in the ranks I have indicated, and the minority be supplied by men of high station in art, who will rightfully fill the post of professors in great Public Schools and the Universities, when we awake.

We shall now look one step further into the progress of our student, in order to complete, or rather close this part of the enquiry, necessarily very far from full or exhaustive, but which has, notwithstanding, exhibited some important results unequivocally arising from that exact teaching of the art of drawing which is here exclusively contemplated when the expression is used in a *bonâ fide* sense.

Let us now suppose the learner copying casts from nature or the antique, the subject being a hand or foot. This would rightfully be accompanied by its anatomical counterpart, without which such studies lose half their significance, and are comparatively uninteresting and unintelligible. Here each various new direction, curve, or straightening of the outline is

referred to its anatomical constituent; a muscle coming into view, a tendon proceeding from the muscle, a ligament binding down the tendon. The mechanical arrangement and adaptation of these organs of motion are explained, they explain the form, and the form so produced becomes the unerring exponent of the action. For let the subject now considered be a lower extremity with the foot drawn up towards the leg: you would shew how the form of the leg, thus or thus modified by the action of such muscles as lead down to the foot and give it motion, would necessarily indicate the foot's position: even though the foot were unseen or by accident broken off, how its position would still be registered in the leg, and how in many mutilated statues of antiquity, gods and tutelary heroes, the postures of which have oftentimes a peculiar historic significance, there abides, through the agency of expression, an infallible evidence to guide the understanding eye. Now various interests are awakened in the pupil. He wonders how the ancients attained to this knowledge of anatomy? And, again, if the expression of the countenance, which has been hitherto very much like magic to him, is referable to muscular action?—if flowers have expression, without muscles? It may be, presently, you shew him the *bent* arm of an athlete, and point out how the muscle that *straightens* the arm is in *violent action*; and ask him to account for the apparent contradiction, which he will probably do by inferring that the sculptor was a smatterer of anatomy. Upon which you lead him to the group from which this arm was taken, or, in absence of the group, sketch or describe its position, and explain

how this figure, which has been thrown in wrestling, supports itself upon this forcibly bent arm now endeavouring strenuously to straighten itself, and exemplify the fact by placing *your* arm in such position, and *his* finger on the swelling muscle. Think of the new interest he will take now in Greek literature, when he finds these Greeks brought so near him! Can we count the fresh springs of enquiry thus opened?—the earnest living interest in the past?—the spur to some undefined exertion in search of it?—the aspiring to more knowledge in the present? But let us go back to the foot, for we have not done with it: the most important lesson is to be learned.

Our pupil's faith in the, so to speak, inexhaustible contents of organic creation goes on growing: the wisdom and the wonder thicken as his studies lead him upwards. He has found how each minutest curve or straightness of outline, in the limb he copies, has an underlying cause in the motive mechanism, or the nutrient vessels, and how the subsidence or turgescence of either is in harmonious relation to the whole: but the master-miracle of perfection is to come. You first draw a rude diagram shewing the effect produced by the omission of a single structure—by the removal of that annular ligament that binds down, at the instep, the muscles of the leg where they proceed to the foot they have to move. Now the foot is to be drawn up towards the leg, and to do this the muscles of the leg must contract. The tendons or cords of the muscles consequently fly up in a straight line from the middle of the shin-bone to the toes, quite doubling the width at the ankle joint. You draw this, however, and shock

all eyes present at sight of the hideous enormity. The grotesque humour of the thing is irresistible truly, but the point gained lies here: the eye that before could see no beauty in the natural foot, will now not fail to see ugliness in the unnatural. The beauty, hitherto unappreciated, will now by contrast be inferred: this is something. And, after this, you may securely teach (despite the outcry against teleology) that two things, at least, were designed here: that the Maker meant, in the admirable mechanical arrangement, convenience to the owner of the foot; and, in the resulting beauty of form, pleasure to the human eye that sees it. That the facts are so, no one disputes (not even the most Calibanic analyst of his own Setebos): all human eyes, bating a few diseased exceptions, do derive pleasure from contemplating what is beautiful; and the possessor of a well-contrived organ does find it a convenient possession. To believe, then, that these ends were not contemplated or designed, is to believe that the Creator conferred upon what He created more functions than He was aware of. I do not think the intensest antiteleologist believes thus: nor can I conceive of anyone doubting for an instant that whatever is, was designed, and is in all respects perfectly adapted both to do and suffer whatever it does do and suffer, whether for its pain, pleasure, support, or destruction: or, That as much as we know of a thing's capabilities, so much we know of its design.

And if this be a "theory" to the student of structure, it is not one to a student of beauty. He may see one foot less beautiful than another, but he cannot imagine it improved. Dissatisfied with its comparative want

of beauty, he, at first, tries to alter or modify it, but ever finally returns to nature's more harmonious combination, beyond conception perfect of its kind. To him it is a practical experience that in every whole which nature makes there is a perfect coadaptation of parts, of means to some unknown end; the evidence hereof being within him, a sense of beauty or harmonious relation. Then this sense of beauty, this exponent of perfection, presently extends itself to structure also, inasmuch as he finds structure or mechanical adaptation to function ever going hand in hand with beauty; that he cannot alter the insertion of a muscle, the elasticity of a ligament, or the span of an articulation, without incurring corresponding loss of beauty. Here then is the master-miracle: while reason discerns in the mechanism of the foot a more perfect adaptation of means to ends than its utmost ingenuity can propose, and is met everywhere by unexhausted wisdom; the sense of beauty is satisfied beyond its utmost longings in the very attainment of what seemed hitherto solely a mechanical object. For, now that the laughter attendant on your grotesque experiment has subsided, if you propose that the elastic ligament at the instep be substituted by an unyielding substance, such as wire, and go on to draw in diagram the appearance presented by the upturned foot making, as it then will, an intolerably acute angle at the instep, not an eye but will recoil from such a discord. What better means, then, of establishing the just referred to mysterious correlation of animal mechanics and animal beauty than that offered not by "theory" but by practical observation and analysis? by a simple

examination of the fact as it is in nature, revealing how exactly in proportion as the abhorrent acute angle increases in painful acuteness with each increased upturning of the foot upon the leg, so the mechanical cause of this action secures the interposition of a harmonizing medium, a line, midway between the two diagonals, obliterating the discordant angle they must otherwise have made; and doing this, moreover, in a manner most minutely observant of the demands of beauty. For while the position of the limb is such that the contour lines of leg and foot make an obtuse or softened angle, this intervening line formed by the tendons and ligament is nearly straight, conferring by its straightness an expression of rigid stability on the now standing limb, and supplying not the soft (it is not now wanted) but the severe element of beauty: whilst, as the foot is drawn up and the angle with the leg becomes more and more acute, this intervening line becomes more and more curved, so as not merely to fill up the acute angular gap, and soften and equally divide it into two obtuse angles, but moreover to merge these two obtuse angles into one another,—to unite them by a curve of most subtle generation, probably the hyperbolic section of a very obtuse cone.

Now, do we find, in the contrivances of human intellect, that the most perfect development of mechanics is commensurate and coextensive with the most perfect development of beauty? Rather do we not find in most of our more perfect adaptations of mechanical power that there results a lamentable diminution and deficiency of beauty? As a steam-

ship is incomparably less beautiful and expressive of function than a sailing-vessel: as a long line of monotonous posts and wires above ground, a scientific improvement on the subterranean telegraph, is a grievous addition to our oppressive accumulations of ugliness: as a railway is less beautiful than a turnpike road: as letter-press is less beautiful than manuscript: as machine-carving is less graceful than hand-carving. And because we thus find our so-far progress to the attainment of perfect mechanism, on the one hand, and to the attainment of beauty on the other, a progression in inverse ratio; that our deeper designs, on the one hand, defeat and antagonize our designs on the other; is it safe therefore to conclude that the coextensive progress both in beauty and mechanical structure that awaits on each upward step of nature is not the result of a design at all? that it is too hard an attainment to be that?

But I maintain that the sincere student of the beautiful as well as of the structural, who not merely studies but enjoys the sense of beauty, will not, cannot conclude thus. It were as absurd, as impossible as it would be for one who has a friend constantly anticipating his wants by supplying what he partakes of and enjoys, to believe such a friend had not designed the gift,—had no sympathy with him, no care for his comfort. On the other hand, I can very well conceive how a passive recipient of such gift, who just sees there is something put before him, and who, so far from enjoying it, neither cares nor tries to know what it is, or what it may lead to; I can conceive how such an one would arrive at an opposite conclusion.

Though this is not the place for discussing how far the present tendency of thought may have a positivist or materialistic bias, it must be manifest to all observing eyes that the physical sciences, on the one hand, and sensational literature and experiment on the other, are dividing and almost exclusively sharing public attention just now. So that a lecture on chemistry, mechanics, electricity, on natural or artificial magic, on electro-biology and mesmerism, accompanied by experiments and "illustrations," will, simply in virtue of their subject-matter, suffice to attract large audiences. And while books also written on these subjects, together with sensational works of fiction, find ready and eager acceptance, our rather rarely appearing works on psychology, ethics, poetics, and, in one word, philosophy, are wholly unattractive and uncared for. As I believe statistics will bear me out in assuming these data, we will, taking them for granted, look into them.

First, it must be owned they are at least remarkable, if only from the fact of their placing a true science like chemistry in the same category of public favour as the pseudo-science of mesmerism. What is it these possess in common to account for this hold on public attention which they have obtained in common? The rationally consistent relations and analogies of the former are certainly not found in the latter: the analysis and candid scrutiny are not: but the sensational excitement inseparable from experiencing hidden transformations, visibly-unaccountable motions, boilings, bubblings, hissings, explosions, and electric flashes, the wonders, the hopes, the fears, the surprises,

the curiosity, and the indefinite expectations,—these, all of them, are common to both, and, what is really somewhat significant, happen also to be common to novel-reading, magic, mechanics, spirit-rapping, electrotyping, and revivalism equally. Fire burning under water, a brass knob taking your fingers in custody, a dumb machine quietly sorting letters, and a convert or a table kicking up its heels, are all really very much alike: and this not merely to the undiscerning multitude, but to “well-informed humanity,” “first-class” magazines, authors, priests, senators, and mathematicians even.

So I think we have, at last, as anatomists say, “cut down upon the structure” of the age “sensationalism” (for having found the thing in a fuller perfection than our fathers did, we have found for it, of course, a fitting name). But how have we run into sensationism and a passive credulity prepared to entertain any sort of miracle so long as it be a new and not an old one? With our less physical science twenty years back, a “spiritual manifestation” was too gross a figment to frighten an intelligent child; while now, with the sobering, rationalizing influences of bright-eyed science surrounding us, we shake our heads and say, “Really such wonders have been done of late that one is ready to believe all things possible. When messages go round the world in no time; when coaches go without horses; when the sun draws your likeness, and natural selection makes a man out of a monad,—it would be rash to fix a limit to art’s and nature’s hidden powers.—I grant it seems absurd enough that Shakespeare and Shelley should rap out rhymes on

the table; and twenty years ago I should have laughed at and called it impossible; but then I should have held it impossible to flash messages across the Atlantic: both were equally impossible then, and now one at least, you will admit, has become an accomplished fact."

Thus far we get and no farther. They who argue thus, and they who disapprove of such argument, at this point part company because the question is held to be at dead-lock. And yet surely here the interest begins. For is it not a question fraught with interest,—a question demanding prompt reply,—whether we are to hold ourselves passively prepared to entertain without prejudice each and every demand on our belief? or whether we are justified in exercising a discretionary reserve to the extent of withholding both belief and enquiry? The abstention of argument on so vital a point must have import. What is it? Scarcely can it be that this, like the former question that led to it, is likewise regarded as a hopeless case of dead-lock? Rather, might one conjecture, it happens thus. A asks, "Why doubt this for its seeming impossibility, when other seeming impossibilities have proved fact?" B replies, not by answering the question, but by proposing another to this effect—"I am therefore to believe all I cannot disprove?" So that, both querists waiting for an answer, neither of these questions can progress. We, however, are brought back to the moot point, Why does B abstain from answering A's question? Because he cannot find an answer? Because he will not? Or, because there is no answer? I am disposed to adopt the second of

these solutions, though it is, doubtless, often mingled with the first. Stated fully, A argues thus—after insisting on the parallel *à priori* improbability of the achievement of the electric telegraph and of Shakespeare's spirit dictating verse—"We do not know what electricity is. Neither do we know what spirit is. With the aid of a system of prearranged symbols, electricity, without any visible presence, is the means of intelligible intercourse, ringing bells, turning an index, etc., just as our own nerve-force, with no visible presence, moves a pen or the tongue, and communicates ideas by the aid of prearranged symbols, namely language. Why should not electricity be the medium corresponding to our nerve-force, by which disembodied spirits, without any visible agency, correspond with one another, and, by the aid of material and prearranged symbols, with embodied spirits?—seeing that electricity is in fact obedient to the will of some animals (the gymnotus, torpedo, etc.)". Now instead of owning that, in the category of reason, so far as it accounts for phenomena, there is indeed no answer to A's question, B proposes another question to A, as we have seen, tacitly implying (I conceive) his conviction that the answer he *can* give will not be entertained by his rationalist opponent, forasmuch as it is grounded on evidences extra-rational. But I contend that, to make the argument advance, B might answer (after making the aforesaid admission) that, in the category of reason, dealing not with facts accountable but with facts unaccountable, yet facts no less certain, such as feelings of pleasure and pain, security, insecurity, and other the æsthetic and emotional phases of consciousness,

he can answer the question very sufficiently. For he might argue that as he feels an unaccountable repugnance to the interference of disembodied spirits, a belief herein, *reason tells him*, would embarrass his daily life: that he finds, moreover, that intuition and not reason (in its objective application) is his principal arbiter of action: that he cannot submit logically to demonstrate whether he ought to dine on flesh or fowl on a certain day as the day would not suffice for the demonstration: nor logically to ascertain what lady at a ball he should dance with? for similar reasons touching time, opportunity, etc. In fine, that he uses reason to decide when its use is convenient and when not.

And herein his rationalist opponent is at one with him, for he and all of us are something more than a brainful of syllogisms, and, in the varied and hourly demands for action, are guided by the free adjudications of feeling, insight, and sympathy derived from former experience. And it is the very pedantry of rationalism this feigning to exclude these influences and to govern our actions and belief by an abstract ratiocination. But if this faith in one side of our nature exhibits, *prima facie*, a reprehensible indifference to many other channels of evidence, its *results* are so singularly self-destructive, and at the same time so illustrative of the value of such broader views as we have shewn to emanate indirectly from artistic study—so connected with those “indirect effects” we are now tracing—that it is necessary to look into these last-named results, which are: First, in consequence of a neglected and deficient culture of the non-rational

and emotional faculties, an unregulated and insubordinate self-assertion on their part to independent action, resulting in that prurient sensationism we were seeking to account for: and, Second, in consequence of this one-sided habit of thought being exclusively ratiocinative, a sanguine dialectic tendency to argue out and vindicate the views and beliefs we may happen to affect. And hence that crude attempt to reason syllogistically in behalf of such wild speculations and bare possibilities as now naturally affect, excite, or promise to satisfy the cravings of these hungry, undisciplined emotions, which however we may neglect to cultivate consistently and side by side with reason, we cannot by any means get rid of. They are still the immediate cause of the affections, and have that name commonly assigned them; they are ever before reason, furnishing the material she works upon (for there is ever a guess, prepossession, or intuition before the rational process can begin): and so sure as these have been estranged from reason they will set her strange work to do: we shall see her (whenever she turns her eyes from her one book of materialism) arranging her syllogisms to support a belief in spiritual manifestations, interplanetary telegraphs,* or a mechanically induced millennium with aëronautic saints!—or say rather, we have seen her doing this.

The views here expressed will scarcely, even in these days of rapid reading, be misinterpreted or taken as unfavourable to the admission of the natural sciences into our schools?—seeing that all along a

* Fourier's serious proposition.

scientific accuracy has been the primarily stipulated condition under which the art of drawing is to be taught; and that nothing short of constant reference to the more obvious truths of these natural sciences (as anatomy, botany, geology,) has been recommended as a means to this end. It must, on the contrary, be apparent that the assistance of rather more than less natural science is contemplated and counted on: that anatomy (not yet incorporated in the revised curriculum) has been steadily confided in as one of the most efficient aids to the better understanding of the higher forms of nature—and this not that feeble inanity called “Artistic Anatomy,” but a measure of the genuine science in its veritable capacity of laying open and explaining the animal mechanism. Perhaps, of all the unprofitable servants of knowledge this world has seen, the most unprofitable and fallacious are these thinned-down dribblets of science levigated for the use of drawing-masters and the misty humanity they dominate—thinned down to the washing out of every tough particle of truth—to the smooth tone and temper of the nebulous intellect whose synonym is “Oriental tinting”; and who, if “not blind” and “waiting for day, though sitting girt with doubtful light,” yet receive no ray of truth from this quarter. But that they do get abundance of untruth, witness the transfigured appearance which Science makes in those precious modicums of botany, geometry, optics, and anatomy, which embellish our treatises on art.*

* We might have hoped that works, published under the patronage and by authority of the Government School of Design, for the use of Schools of Art, would at least have been exempt from such disgraceful

Quite bad enough for their readers were it if the authors of such books were the sole responsible agents; but when (as the foot-note shews) some of them come forth with a national or governmental sanction, we feel a measure of national responsibility, and wonder and blush that it is possible, amidst such a plenteous harvest of science as the age produces, that these errors lead quiet lives in print! We ask naturally if the reviewers are asleep? But the works have all been reviewed: the one in question was reviewed by a leading and highly respectable magazine, and none of the blunders were exposed. How does this happen? Let us see; for the question is by no means

fallacies—that the royal insignia on the title-page would have been our warrant for the book's contents being, if not brilliant, at all events free from gross errors! such solemnly paraded ignorance as discredits us in the eyes of continental neighbours, who, with all their faults of government, do somehow possess a governmental faculty for selecting the right men. Surely but for its being ludicrous, it were painfully humiliating to find in what is our authorized text-book on perspective the emphatic (italicised) assertion that “a circle seen in perspective is *not* an ellipse”! and this preceded by the solemn assurance that “the student will do well to bear this fact in mind:” the wretched blunder accompanied by an abortive attempt at mathematical demonstration which leaves no opening for a typographic excuse. Vide p. 78, Burchett's *Linear Perspective*. Wherein, at pp. 4 and 5, there is a wholly false teaching concerning the broken appearance of a stick, and apparent displacement of a stone, as effected by the refracting medium of water—a blunder the less excusable because gratuitous: there was no need to treat of refraction. And yet again, at p. 8, we have the circular boundary of vision ascribed to the circular form of the pupil, whereas it is well known to the student of anatomy that the field of distinct vision (and this is what is referred to) is much smaller than the luminous circle transmitted by the pupillary aperture, and that the cause of the phenomenon is simply the fact of the centre of the retina (the *limbus luteus* of Sömmerring) being more sensitive to light and receiving more direct rays than the (circularly) surrounding parts. So we have modicums of geometry, optics, and anatomy, and all spurious.

irrelevant, but most pertinent to our present investigation. Enough has been said of the utterly inexact and unintelligible character of elementary art in its present state to account for the fact of all professors of exact science fighting very shy of such an arbitrary subject: *they* would not undertake to criticise in a case which admits of no rational analysis, where no exact canons of criticism apply. The task consequently devolves upon "Fine Art critics," who may treat very eloquently on the poetic aspect of art, but who are not scientific authorities; who dabble occasionally in science, with what result may be seen in the Appendix to this volume, which is an analytic examination of a paper that appeared in so talented a periodical as the *Saturday Review*. We have however shewn how the errors escape detection. Let us see, next, how this fact affects us. Whilst advocating an exact teaching of the grammatical elements of art, we have pointed out how the whole subject lies involved at present in presumptuous arbitrary dogmatism and uncertainty: we have said that the obvious remedy is to begin at the beginning and teach art grammatically and critically in our schools, to call the attention of scholars to the undreamed-of possibility of doing this, to make patent the incalculable benefit directly and indirectly arising from such an enterprise, and, so, to enlist their sympathies not only in the cause as a good and honourable one, but likewise in the subject of art itself (always in its exact aspect) as one which is worthy of their critical attention and susceptible of critical treatment. Let this be done, as it must and will be done, and is

now beginning to be done—And what follows? Why, men of education and exact intellect will no longer stand aloof, as they do at present, both from art as a thing unapproachable, and from artists as things unintelligible, but will supply the critical deficiency just now referred to, expose an accumulation of error quite unparalleled, and ensure a perseverance on the path once entered upon, checking excesses and stimulating tardiness: the new system will begin to live.

And now it must begin to appear how the study of natural science, recently introduced in our schools, will be the first to benefit by this change. What at present is the chief difficulty encountered in our classes of geology, botany, and mechanics, but one arising in the pupil's inability to make truthful and significant outlines from the objects and diagrams put before them at lecture? That the teachers of these sciences are ever complaining of this deficiency is but too well known to all who are acquainted with the working of the present system of education. Whilst it is no less commonly a matter of observation that the boys' inability to translate a solid to a surface is a constant source of perplexity to instructors in practical geometry: but no less notorious is it that the slipshod "drawing-master's drawing" a parti-coloured surface, the index to no form of solid, is characteristically impotent to satisfy either of these demands. But whilst a very limited amount of honest accurate attainment would suffice to answer both these demands, the demands themselves would be effectively a school of practice preëminently fitted for further developing the skill and accuracy of the drawing pupil as such;

and, above all, would be a practical comment, in his eyes, on the immediate usefulness and manifold applicability of his acquirements in the drawing class,—a peculiarly encouraging stimulus to exertion, which the tutor will cordially and (perhaps only) fully appreciate.

I insist on these particulars the more minutely because it may be objected (though the objection is wholly grounded on ignorance of the facts) that the thorough and exact teaching here advocated may not be realised without a larger allotment of time than we can afford to bestow upon drawing. Now if it were not true (as I know it is) that the time we at present give to a practically unproductive process is amply sufficient to start the pupil with such an amount of true principles and practice as would not only be highly serviceable in itself, but possess moreover an intrinsic power of future development: I say if this were not the case (being quite certain however that it is), yet the mere obvious consideration of other *exact* studies naturally coöperating with, and so multiplying any amount, however small, of *exact* delineative skill, is sufficient in itself to nullify the foregoing objection, while it sets forth in a very striking manner the unexpected sources of advancement available in aid of true teaching, or true anything, when once the true beginning is made.

All that section of the school curriculum called Natural science will therefore be, as we have observed, our most active and powerful ally, not only evoking, and exercising in all exactness and honesty, the pupil's power of drawing, and rationally unfolding and eluci-

dating the object which he delineates, but adding a peculiar interest and encouragement to the pursuit of graphic art, which, in its turn reciprocating the benefit by materially assisting his acquirement of these sciences, both in point of precision and rapidity, will prove as valuable to them as they to it.

We thus see some of the indirect or *mediate* effects of this study redounding to its own *immediate* progress and advantage: a crucial test and unequivocal evidence of this system being a true one—true in the only sense of truth we can attain to—where the thing, whose truth is to be established, is in harmonious accord with the natural constitution of things, moving in sympathy with the laws of that constitution, and instinct with that economy or reciprocal subserviency to a result which characterizes nature's process, that of completing a circle of causation—of causing a thing to receive a new impulse from the sum of its effects on other things.

Lastly, in this rude attempt to form an adequate estimate of the indirect effects of this system, we must by no means omit to weigh the importance and value of the learner's confidence in his tutor, not merely as it affects his immediate progress in this or that study (which is not our present subject), but as it generally or indirectly affects him; affects his moral estimate of justice, consistency, obedience. Under the old drawing system, when it happens that a boy obtains a prize for his performance, he has not, and cannot have, confidence in the result being just or consistent with any merit of his own, knowing, as he does, that his master had a share in the task, and knowing, moreover, that what

he himself did was done without any clear conception of what he was working to accomplish. And he will argue that his prospect of a future success must mainly depend on two chances: first, whether his master may or may not perform as large a share of the task; second, whether he may or may not be lucky enough to achieve such feats as his master will applaud: he *can* do no other than conjecture simply because the obvious and intelligible criterion of an accurate imitation of, and likeness to, nature is denied him. For he sees all too plainly that the trees, plants, and rocks in a highly-praised prize-drawing bear no resemblance to these objects as he knows them in his botany or geology classes. He sees likewise that the masters of these classes smile at, and by no means prize, such prize-renderings of the objects of their scientific study—rather does he hear (and not seldom) remarks to a contrary effect, recognizing more faithfulness to fact in a prizeless performance than in a prize one—hears also that “the former is possibly less *artistically* clever than the latter”—that “Mr. Gandish is the best judge of *that*”—hears and answers (this confiding young soul)—“Oh yes, Mr. Gandish said it was broader in touch and treatment, and took the prize for its remarkable breadth.” At which *naïve* utterance our tutor will safely attempt frowning in proportion to the state, more or less bordering on explosion, of his own countenance. After this too suggestive survey of the facts as they at present are, and the inevitable inference as to any least hope of confidence, respect, or obedience on the pupil’s part being realised, it would be idle to set forth how an

opposite state of things would give rise to opposite results, and I shall be exonerated the making good of the remainder of my proposition.

It now only remains to close this chapter with the consideration—it seems to me a grave one—of another indirect effect of the exact study and imitation of form. I referred to this before, and bestowed upon it some minute attention, pointing it out as a possible corrective of one-sided or partial conclusion arrived at by isolated reason, by reason disjunct and alienate from instinct, feeling, and emotion, all of which, I contend, are normally, and not accidentally, integral parts of our being, essential elements of human nature. And I endeavoured to shew how any attempt at severance, or one-sided development, of these elements was inevitably and fatally followed by anarchy, conflict, and loss of aggregate power to the individual economy: so that while the emotions became insurgent and developed into gross sensationism and prurient appetite, the reason, solitarily employed, ran into materialism and logical gymnastic, becoming a mercenary fighting in the cause of the dominant appetite, whatever that might happen to be: now for material autogenesis of the universe, now for the probability of a science-induced millennium, or a grotesque superstition touching spiritual manifestations and mesmerism. And though I am conscious that the arguments advanced on this head were not sufficiently fundamental and exhaustive to convince such as conceive the human soul to be merely the aggregate or sum total of the animal functions, I trust they were sufficiently convincing for those who have not arrived at this scientific conclusion: and, in this persuasion, I proceed.

The study of words still is, and perhaps must be, the main employment of our school-days. This study is exclusively an exercise of memory, and a means of developing it, but no means of developing the spirit of enquiry, the faculties of imagination, and original or independent thought. Now I have supposed it conceded that all the faculties are, in a really liberal education, to be proportionately and harmoniously developed;—that the doing this is in fact education, the drawing forth of the powers of the soul—not the making it, or any part of it (if we can conceive it to have parts), but the evoking, the summoning it into a world of phenomena, whence the means of mind-growth or intellect.

But as it has been observed, or supposed, that memory is most powerful in childhood, it is argued that childhood is the time for its exercise: and however it is true that the memory is highly retentive in childhood, it is not proved to be more so then than it is in mid-life. We do indeed exercise it more (almost exclusively) at the former period than at the latter, when we give the rein to imagination, enquiry, and independent thought; but it must not be forgotten that these latter, despite our attempts to suppress them, are unmistakably present in childhood: that curiosity and originality are much more characteristic of the child than of the man, who, familiar with surrounding facts, outgrows the habit of questioning them:—we may surely then argue, on the same grounds as we occupy in making the strength of a young memory a plea for its then cultivation, that a child's powerful curiosity and original way of thinking are

a plea for at least not neglecting or leaving those faculties uncared for. Here then the natural sciences are an immense help in this respect: they encourage the thinking power to some extent, keep keen the edge of enquiry, and confirm that idea of the relation of things that we call effect and cause.

But while the active powers of mind are thus evoked, and the spirit of enquiry fostered, or at least kept alive, instead of being ruthlessly immolated at the shrine of memory, it will also happen that a habit of mind will be initiated of a character somewhat final and absolute, in familiar phrase, matter of fact, or prone to rest in, and be satisfied with, each *cause-invested* fact as it turns up. For if men, advisedly meditating the matter, warily and with difficulty avoid imputing something of efficient causation or inherent ability to each antecedent link as they arrest it in the infinite chain; if grown men, profound physicists, while believing matter to be inert and passive, will invest it with a functional potency to multiply, develop, vary, and select; will coin the ideas time and force into potential entities able to aid and cooperate with the former, forgetful that "cause and effect" mean only the observed antecedent or subsequent relations of phenomena with one another, all of which phenomena have an equally mysterious origin and an equal dependence or causation,—if, despite this admonitory knowledge, we are captive to the specious illusion;—the young mind, impatient, eager to be satisfied, will hardly escape such entoilment. There is a satisfaction in referring one phenomenon to another, as in knowing whether we caught cold by a window

or a door. A word even affords much content, as is evinced in the disquietude of a patient till he learn from the doctor the name of his disease, though that name may have to him no meaning. And the boy comes to rest, and absolutely believe, in the final efficiency of "chemical elements" and "physical properties," in "gas," "electricity," "force," "tension," and "affinity."

In debating the question how far this tendency of thought may or may not be increasing to a mischievous extent, we should perhaps do wisely to reflect that, supposing such tendency to really exist, there would necessarily be a corresponding indisposition to regard it as mischievous, or perhaps to recognize its existence at all: there would, on the contrary, be a readiness to deprecate any suspicion of its existing, and to dismiss such an apprehension as a groundless crotchet. Now of course this proves nothing; but yet if we should find any symptomatic evidence in favour of this supposed crotchet being no crotchet, the fact of its being supposed such will be reasonably accounted for, and tend rather to corroborate than invalidate our position.

But that some such evidence has been adduced will, I think, be admitted by all who have attentively considered what was last said on this subject: but as the spirit of the age's thought is, like other spirits, hard to put in evidence (excepting to the spirit-mediums), we must content ourselves with hearing speak one who powerfully and characteristically represents the spirit of scientific enquiry now in vogue, a profound and at the same time popular physiologist,

Professor Huxley. He is arguing against what he calls an "Independent* Creation," and in favour of Mr. Darwin's theory of development by natural selection, and says :

"Take, again, another set of very remarkable facts,—the existence of what are called rudimentary organs, organs for which we can find no obvious use, in the particular economy in which they are found, and yet which are there. Such are the splint-like bones in the leg of the horse, which I here show you, and which correspond with bones which belong to certain toes and fingers in the human hand and foot. In the horse, you see, they are quite rudimentary, and bear neither toes nor fingers ; so that the horse has only one "finger" in his fore-foot and one "toe" in his hind-foot. But it is a very curious thing that the animals closely allied to the horse show more toes than he ; as the rhinoceros, for instance ; he has these extra toes well formed, and anatomical facts show very clearly that he is very closely related to the horse indeed. So we may say that animals, in an anatomical sense, nearly related to the horse have those parts which are rudimentary in him, fully developed."

Here the final and absolute tendency of thought is well exhibited in this great authority regarding development as a final and absolute entity, as capable of being "full" or absolute, as the development of the phalanges of the rhinoceros are here affirmed to be. It is not uninteresting to observe how by calling something by a name, and assuming what it ought to be to merit that name—on our own part by gratuitously doing this—how we presently find nature in default. We have, in short, finally closed a question concerning nature, which, like all natural questions,

* I have no conception of what is meant by "independent creation," nor do I think that they who use the phrase have any clear idea annexed to it, all creation appearing strictly correlated and inter-dependent. Is it worthy of such writers as Mr. Darwin and Professor Huxley to fasten upon this vague expression of an inept vulgar conceit, and assume it as our only alternative if we reject their theory of a development effected by time and circumstance independent of the ever-present exercise of a divine energy ?

should ever remain open ; and when we come upon some new (nature's) phase of that question, we find that it will not square with our final conclusion. That is all. We call a certain bone "a digit," and assume that it ought to be so developed as to perform a digit's function, and where we find it so developed as not to perform that function "we can find in it no obvious use." Yet no one should know better than Professor Huxley (who professes this ignorance) that these splint-like bones of the horse have, like all other bones, a proper function : that all bones either afford attachment for muscles or protect neurine, or do both of these things. But we have made up our minds finally and absolutely as to what nature ought to do, not to try to find out what she is doing, and we find as a result that a horse, which we admit is most beautifully and perfectly formed for speed and draught, is doomed to carry about in those very legs of his which qualify him for these purposes, certain useless undeveloped rudimentary lumber, the necessary encumbrance of an anciently entailed estate, beginning in a "primordial form" or monad, and thus encumbered by time and insuperable circumstance. And this we call unprejudiced examination of the facts of nature.

True, under one aspect, or *relatively*, we may find (as certain philosophers do find *absolutely*) imperfections or shortcomings in nature. Thus bones which are surprisingly strong, and light, considering their strength, do break, are imperfect in behoof of infrangibility : but if we are students or disciples and not masters of nature, ought not our conclusion to be

that occasional fracture was intended? that the wasp's sting, for instance, which Mr. Darwin regards absolutely as a very imperfect instrument, and only excuses on the concise plea of nature's inability to do better under the prescribed conditions of development by natural selection, was really intended to be (as we find it) an occasional cause of destroying the wasp? It is most singular that a philosopher who takes so far from an atheistic view of nature that he recognizes the need of a Creator a long time back, and attributes to Him the marvellous creation of a primordial cell which had in it, as it were—involved, the means of unlimited development,—that a philosopher who recognizes also most emphatically a benevolence accompanying such a scheme of creation, should forget that these apologies for the scheme's shortcomings are a tacit admission and assertion that the all-wise and benevolent Creator could not foresee these failures and deficiencies—these inevitable consequences of the original constitution of things? But if he demurs at this constructive imputation, and maintains, on the contrary, that the Creator of the Universe could and did foresee these consequences, then he admits of all things in their minutest individualities being designed, and recognizes the doctrine of Teleology: but if he still replies that foreseeing is not identical with designing, we answer that, if *designing* is the providing of a special cause for a special result, whatsoever result arises undesigned of the Creator arises from a cause other than the Creator: and we have, in fact, more than one Creator. The frequent occurrence of the very word "necessary"

implies a limitation to divine power, a potent opposition to divine will. Many creatures are less perfect than benevolence would wish, according to Mr. Darwin's doctrine, if not in his own exact words. He says, "we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt (has he watched a detachment of ants operating on a writhing caterpillar?), and that the vigorous, the healthy, and the happy survive and multiply." He says also, "can we consider the sting of the wasp or the bee as perfect, which when used against many attacking animals, cannot be withdrawn, owing to the backward serratures, and so *inevitably* causes the death of the insect by tearing out its viscera?" (I italicize "*inevitably*.") All of which means that divine wisdom and benevolence did not design the imperfect construction, or the suffering: but that they are an inevitable consequence of what?—of some other cause or power, or preëxisting constitution which the Creator had to deal with but could not alter or wholly counteract, though He foresaw and disapproved of certain *unavoidable* results (of such already existing constitution), namely, imperfect construction and suffering. That this is his tenor of thought on the subject I cannot doubt, on a careful perusal of the following:

"If we look at the sting of the bee as having originally existed in a remote progenitor as a boring and serrated instrument, like that in so many members of the same great order, and which has been modified but not perfected for its present purpose, with the poison originally adapted to cause galls subsequently intensified, we can perhaps understand how it is that the use of the sting should so often cause the insect's own

death: for if on the whole the power of stinging be useful to the community, it will fulfil all the requirements of natural selection, though it may cause the death of some few members."

Here it is literally affirmed that this imperfect sting is developed from or made out of that which was never meant to be a sting,—that it is old material "worked up," in Mr. Darwin's own phrase,—that it is in fact a bungle, though at the same time a wonderfully good sting, considering the material at command, and the limited conditions prescribed. But then, as if there lurked some sense of an underlying absurdity and contradiction, we are told that the "main result" conduces to the advantage of the multitude "though it may cause the death of some few members"—which does seem very like a plea for the "main result" having been, after all, designed. But as design is steadily resisted as regards this special case, we are left to the singular conclusion that, if we admit the "main result" to be good, there is at least no one to be credited with the good, no one to be thanked for it except time and inevitable necessity. But why does this philosophy encounter such a ludicrous dilemma? Simply because it aims to economise the adaptation of means to ends, to save Deity the trouble of interfering with nature after having once created a "primordial form of life," to measure Deity by the same standard as applies to ourselves, to take the constant exertion of power, which we know to be irksome to ourselves, off His Hands also!

Now whether is it better, more wise, that is more widely and not one-sidedly rational, to bow in sorrowful acquiescence before the suffering of the eviscerated

bee or the writhing caterpillar, or to say, it is truly very sad, but Providence did not design—could not help it?

Perhaps one of the more striking characteristics of the influence of this absolute and final mode of thinking is the immense confidence which those who adopt it seem to possess in their own peculiar right to a more rigorous logic, a more accurate and unprejudiced observation of facts, than falls to the lot of their opponents; and this with a *naïve* unconsciousness not only of the final contradiction which issues, as just shewn, from the tenor of this teaching duly weighed, but of startling contradictions in detail, as in the last quoted passage, the admission that the sting should “*so often* cause the insect’s own death,” and the immediately following assertion, that “*it may cause the death of some few members.*” Again, in behoof of accuracy and impartiality, we meet with the imputation against opponents of the doctrine, that “they admit variation as a *vera causa* in one case, they arbitrarily reject it in another, without assigning any distinction in the two cases. The day will come when this will be given as a curious illustration of the blindness of preconceived opinion.” And again, “I look with confidence to the future, to young, and rising naturalists, who will be able to view both sides of the question with impartiality.” But we meet with no symptom of suspicion or misgiving on the part of this school, that they are putting a gentle pressure upon facts when, holding as they do, that the lower animals have will and understanding, that even “the essential processes of reasoning are exerted by the higher order

of brutes as completely and effectively as by ourselves,"* and thereby admitting that the brute is not only sensible to pain, but moreover capable of reasoning upon and fearing it,—when, holding this opinion (which the less final and less "matter of fact" interpreters of nature do not hold), they assert that "no fear is felt," and, in the teeth of the "matter of fact" evidence of prolonged suffering—an insect writhing for hours in the toils of a spider or at the mercy of the ant, a quadruped tortured through life to the final extinction of the species,† "that death is generally prompt."

* Professor Huxley (p. 57) on the causes of the phenomena of organic nature. It would be manifestly unfair to make Mr. Darwin responsible for Professor Huxley if we were criticising Mr. Darwin: but we are here merely examining the mode of thought (exemplified in these eminent authorities) as exponential of absolute or positivist philosophy. Mr. Darwin does, however, speak of ants possibly "fancying they have been victorious in a combat," and does in effect attribute to them something very like reason.

† "It is not that the larger quadrupeds are actually destroyed (except in some rare cases) by flies, but they are incessantly harassed and their strength reduced, so that they are more subject to disease, or not so well able in a coming dearth to search for food, or to escape from beasts of prey." (Darwin's *Origin of Species*, p. 195.) Mr. Darwin is in short arguing that a tail, which acts as a fly-flapper, may save a species—that whole species have been gradually exterminated by flies. He insists on the slowest wearing down and torturing to death conceivable when, in support of his theory, he is demonstrating the value of a tail: but when he is upholding his theory on the grounds of benevolence, then he forgets all about the life-long harass and prolonged torture; not only forgets all this former plea, but says "we may console ourselves with the full belief that the war of nature is not incessant, that no fear is felt, that death is generally prompt," etc., etc. (p. 79).

It seems difficult to conceive of a more daring contradiction than is involved in the statement that "natural selection" which is performed by "a struggle for life" should be a characteristically benign and tender process.

In pointing out this absolute and positivist tendency of thought, and the counteracting and rectifying influence that a study of form and beauty would necessarily exert, it seemed better to examine a few facts minutely than a great many superficially: for thus, if the facts chosen are, as I think they are, representative, we shall have proved by implication the whole case. But if the works of Mr. Darwin and Professor Huxley, with their wide public recognition, should not be deemed a sufficient exponent of the prevalent tendency of thought, confirmation of my position may be found in the bare mention of the avowedly positivist doctrine pervading the whole of Mr. Lewes's late important treatise, the tenor of Mr. Bain's physiology, and the facts before alluded to touching lectures and public entertainments now in vogue. And if, on the other hand, I have not yet sufficiently established my position, that the study of form and beauty is the natural efficient counterpoise to this absolute view of creation, I would invoke further confirmation by citing the authority of Mr. J. S. Mill, only first observing, in support of the former position, that the Rector of St. Andrew's University delivered the following opinions with a conviction that they were not the opinions of the age, but rather in the teeth of it.

"There is a third division" (of education) "which, if subordinate and owing allegiance to the two others, is barely inferior to them, and no less needful to the completeness of the human being; I mean the æsthetic branch; the culture which comes through poetry and art, and may be described as the education of the feelings, and the cultivation of the beautiful. This department of things deserves to be regarded in a far more serious light than is the custom of these countries.

"There is, besides, a natural affinity between goodness and the cultivation of the beautiful, when it is real cultivation, and not a mere unguided instinct. He who has learnt what beauty is, if he be of a virtuous character, will desire to realise it in his own life—will keep before himself a type of perfect beauty in human character, to light his attempts at self-culture. There is a true meaning in the saying of Goethe, though liable to be misunderstood and perverted, that the beautiful is greater than the good; for it includes the good, and adds something to it: it is the good made perfect, and fitted with all the collateral perfections which make it a finished and completed thing. Now, this sense of perfection,* which would make us demand from every creation of man the very utmost that it ought to give, and render us intolerant of the smallest fault in ourselves or in anything we do, is one of the results of art cultivation. No other human productions come so near to perfection as works of pure art."

I will, with this splendid passage, close an otherwise tedious chapter, remarking, first, how emphatically Mr. Mill insists on art cultivation being "*real*," and "not a mere unguided instinct": and, second, on the ungraciousness of the task which devolved on me while criticising and segregating from one of the greatest efforts of the age, what I take to be Mr. Darwin's fallacies.

* If the sense of perfection is a result of art education, surely the working man, called upon to judge of perfection or imperfection in nature, should have some instruction in art as well as science: and though I doubt if the working man's lecture-room ought to be made the final court of appeal on vexed questions of science, I cannot doubt that the announcement, in such a place, that some bones of a horse have "no obvious use" should, in fairness, be accompanied by the statement, that anatomists find these bones giving attachment to muscles and ligaments (having obvious uses) as well as diffusing the force of shocks (when the horse alights) more than would be the case were the same amount of muscular attachment furnished by one solid bone: and that in the legs of lighter and less powerful leapers (deer), where the shock is less, and a like breadth of muscular attachment not wanted, these bones are not found.

CHAPTER V.

INDIRECT BUT PECULIAR FUNCTIONS OF ART.

IN further estimating the indirect uses of art-knowledge we gradually and naturally arrive at a fuller consideration of what constitutes the difference between art and science,—arrive at a more abstract view of the subject than our hitherto analytical progress has been able to command. For we begin to perceive that, as some objects stimulate curiosity and enquiry, mental faculties (intellect), others pain, pleasure, love, or hate, emotional faculties (feelings), others, again, wonder or astonishment, faculties midway between mental and emotional faculties, and common to both; we have in fact objective counterparts to these three different modes of our being.

But as it will be seen, on closer examination, that one and the same object may address all these various human faculties, as some rare form of vegetation may appeal to both artist and physiologist, and excite the wonder of both,—may address, stimulate, and evoke any or all of these faculties in proportion to the quantum and intensity of our contemplation of the thing; it would appear that all objects in nature may be said to represent the *possible* exertion of an indefinite

(and as yet unknown) number of human faculties. For although we have spoken only of three faculties, of the intellectual, of the emotional, and of a third common to both, yet the very fact of this link's existence shews at once that they graduate into one another, and possess many undetected modes.

So that, taking an oak tree, for example, we may consider it, first, scientifically, for the structure and arrangement of its organs, leaves, flowers, cells, and ducts; second, commercially, for its timber, bark, etc.; third, artistically, for beauty of form, colour, and expression. Now if it is obvious that various intellectual and emotional faculties are called into active exercise under these different views of the same object; and if it is no less obvious that our British ancestors, regarding it as they did under a religious presentment, failed to experience the same intellectual and emotional effects which we realize, what is this but a proof of the indefinitely enlarging capacity of this one object for evoking ever new modes of thought and feeling? and, with the consciousness of these *new discoveries*, an accompanying sentiment of wonder and admiration?

But if any one should think the subject thus exhausted—that here is a boundary to the mind and soul affecting influences of this object, he may readily convince himself of the endlessly enlarging capacity each object owns to thus affect us by pondering how each of the modes of thought and feeling just indicated immediately suggests new and interesting divisions and subdivisions.

Thus the scientific contemplation of the object

divides, under the head of physiology, into structural, organic, chemical: subdivides under, say chemical, into intrinsic and extrinsic: the first in behoof of function and self-sustentation; the second in behoof of the earth and atmosphere, formation of humus, assimilation of carbon, liberation of oxygen, generation of moisture and cold; and variation of climate. Or the commercial consideration, at first restricted to timber, bark, galls, etc., divides into farming economics, leaf-mould deposit for gardens, acorns for swine, and shade and shelter for field labourers: the first of these divisions co-related to vegetable chemistry, the second to animal chemistry, the third to human hygienic and benevolence: the suggestive power of a natural object is as boundless as is our exploration of that object's functions and relations in the scale of surrounding being.

If then, as we cannot doubt, the world of objects has a capacity for suggesting ideas and feelings to an unlimited extent, it follows that the most perfect education (or drawing forth and evolving of the ideas and feelings) is that which enters into most perfect communion with the widest range of these objective stimuli, destined (we must think) to evoke and develop both human faculties: and to nourish and increase the intellect at the expense and to the injury of the neglected emotions, would be manifestly as gross and monstrous an achievement in the way of *excess* and *deficiency* as we see exemplified by the pursuit of some one calling which devolves all growth and nourishment exclusively on one bodily organ to the detriment of the rest; an achievement successful in its kind, but of

that kind illustrated by a tailor, who, with hands enlarged to exaggeration by the daily use of heavy shears and goose-iron, rises up from his shop-board to display a pair of impoverished legs ill sustaining an emaciated trunk. It is a one-sided, or, as Mill aptly calls it, a "lop-sided" and ugly development.

But it is one of the difficulties of modern society to remedy this: and there would moreover appear a real difficulty couched in the fact just referred to, that our faculties, mental or emotional, are called into play by the things which surround us; that these things have inherent stimuli for evoking either the one or the other; and that, as in the case of the tailor, where our social demands set the fashion in one direction, say in that of intellect to the neglect of emotion, we shall still inevitably entertain and peruse exclusively that aspect of things which exclusively stimulates intellectual activity.

How, then, to equally intend our energies upon both aspects of nature, the emotional as well as the sciential, is the problem. For it is only a patient attention and perusal that we need. Let a man be confined to a cell with a small loophole for window, and be furnished with a camera obscura wherewith to supply fixed picture-like images of the world outside,—of a wood, a mountain, or a single tree only; and he will, from the necessarily patient contemplation of these under their pictorial presentment of beauty, derive a pleasure and a solace the mere consciousness of which is love and gratitude. To say that a calm and patient contemplation of natural things will necessarily excite such emotion may possibly be assuming

too much : there *may* be farmers who have failed of seeing, in ripening wheat and shapely oxen, aught besides flour and beef—of receiving any suggestions hence save those of higher market prices. Such a man sees but one aspect of nature, that aspect which social demands have presented to him, the commercial aspect, it may be, mingled with something of the scientific? but the pictorial, the beautiful aspect does not address him. Yet the ox could once appeal, in this capacity, to the many-sided Greek, to him who sculptured the marble of the Parthenon and marked the eternal forms of men, horses, and oxen with a careful reverence for each mode of beauty, not excluding the latter, but acknowledging that these also are His children, of aspect patient, strong, majestic, with big eyes borrowed from heaven's queen. Our farmer is no alien of this age, but akin to it. True, he sacrifices the higher emotions to the lower, high emotion of majesty and beauty to low one of mere gain and greed : but is he not herein twin brother to our tailor dwarfing and crippling his god-like image to satisfy the social demand that such image be disguised in ugliness? Is he not subserving the cause of lop-sided development, forgetting his many-sided capacity? And wherein differ these twain from our philosophers (of the unprejudiced school), who, having developed the sciential half of them, no more, lecture labouring men (too mechanical already) on the all but perfection of man's mechanics, and the excesses and deficiencies of nature's; pointing with learned finger to some "useless" intruding rudimentary organ that poor nature could not manage to eject! and subscribing such dismal witness to the

world's dotage honestly, unquestionably, according to their lights,—lights chemical, kindled in the brain and not in the heart.

And wherein, again, differs this "lop-sided" triad from your mill-owning, mine-owning member for Sellmansoul, cotton lord, and master of "hands,"—factory-hands, mining-hands, blanched and spindling for lack of sunlight and the bounty of earth and heaven's countenance? Hands whom he lectures, crams with "social science," "mysteries of ballot," and "rights of man", they envying a beast's rights of nature! It were invidious solely citing tailors.

Yet this man does according to his light, the light of a one-sided social development, mammon-enslaved and science-doting. For what makes the thing we call dotage if not final reliance on one field of experience, impotence to admit of another field's existence, a faith in this one being all and all-sufficient? Can we ask why Humboldt never doted?—Humboldt, sound and healthy to the last—exploring to the last the great kosmos and its mysteries of wisdom, and of beauty also. And how dare we talk of kosmos? microcosm? or macrocosm? not owning that man's little world reflects nature's great world? Not admitting that one is the exponent of the other?—that the equivalent of the great world's *wisdom* is *intellect*, and *science* in the little; and the equivalent of the great world's *beauty* is emotion and love in the little? and that both the poor human equivalents equally demand human effort to widen and refine them—to make them more worthy their prototypes?

If man could evolve love and kindly emotions out

of science, even then there were no reason for closing the main entrance against these guests who are ever in waiting at our doors. The condition of their entering being, as we have seen on our part, a patient undisturbed contemplation of nature,—a perusal of her features with senses unvexed by ulterior cravings, calm, and of long enough duration to gaze deeply.

But how school brisk British islanders into this unusual posture? it may be asked. Not by shutting them up, surely, with a camera obscura. Your farmer has plenty of nature around *him*, yet he is not the thing you want: why, you may indeed have told us, but how do you propose to make him that?

I answer, By curtailing no iota of his liberty, rather by increasing it, setting free germs of choked-up emotion capable of growth and destined to bear fruit; by dealing with him young, a school-boy, as I have proposed to deal with other school-boys; not by trying to make incision in his indurated rind with institutes of art or science. An eager impatient age has tried adult institutes of literature and science with, I think, problematical success: adult institutes of art will fail utterly for the reason that they are pledged to succeed—saying peace when there is no peace will leave things inwardly worse. Meanwhile I would ask you one thing, my christian brother,—Is this farmer just what you would have him?—in a christian sense?—Do you think that he, a christian, believes what the Master taught; that he does indeed see the surpassing beauty of a field-flower's array transcending, to his mind, the pride of kings? If not—and our modes of life and thought disqualify him for holding Christ's

estimate of nature—has it occurred to you we are antichrist herein?—that such fact is significant?—The emotions dead where Christ assumes them living, demands this as a basis of His teaching,—shall we find them making lively response, think you, to other and higher appeals? Or is ours a learned faith for the learned, of the head and by no means of the heart?

Finally, may the heart and its emotions be left out?

“Perhaps scarcely the higher emotions of love, gratitude, and reverence; but intellect might reason to these without aid from the lower emotions of pain and pleasure derived through the sense. Reason dictates equal rewards for equal virtues: a parent will observe this in the conduct of his household, and will not, at the prompting of emotion, kill the fatted calf for the returned prodigal. Sons and daughters will weigh out their affection for one another with eyes duly bandaged: and young men will choose their wives in this manner.”

“Deformed and ailing children will be *eliminated* by help of chloroform as unprofitable members of the state, old age with its decrepitude will be suppressed; and both these charities (performed with no emotion of horror, such being excluded by the hypothesis) will demand the love and gratitude of benefited survivors?”

Yet such unhallowed impious folly as this is, push it into practice, is it worse than the thing we are doing while we develope to the utmost the intellectual faculties and leave the emotional uncultivated? Whilst, in the province of mind, we aspire to a higher grade of civilization than has hitherto been attained, in the

field of the emotions, we seem resolved to remain primitively savage! What must be the inevitable result of this procedure but what we find it to be, namely, first, an insurgency on the part of the passions imperatively calling for an arbitrary exertion of intellect to suppress them,—of the brain to suppress the heart!—and then a grievous groaning under this intellectual despotism till honest nature rises in revolt and disputes—mark the mischief—not the authority of said intellect, but that of religion by intellect commissioned to do this outrage. The christian religion whose very basis is in the emotions, has, in these latter days of intellect-worship, been made to teach us to subdue the emotions, to suppress the passions; and nature, impatient of such injury, is now turning round mutinously on misrepresented religion, and threatening the age with infidelity.

Right reason, that is wisdom, takes account of both intellect and emotion—of the whole man; and, instead of suppressing any human faculty, duly and consistently develops each, and represses the exuberant in both: for intellect also *may* run riot. How a religion, which both in its first and in its second dispensations so distinctly and emphatically taught this truth, could have been warped into the form we have brought it to, invested as it now is with a presumed antagonism to human emotion, would indeed appear most unaccountable but for a piece of historical information which all too clearly dissipates the mystery. It has happened in these last years of progress that intellect, in the shape of scientific discovery and invention, has so largely contributed to the increase of

material wealth, that we have taken it, at sight, to be the very god of the idol-god mammon, and, suspending our adoration of the latter disreputable deity, we have set up the former bran-new unsuspected one under the imposing name of science, sworn our allegiance body and soul; pledged to go all lengths with science, whatever Old and New Testaments may say of knowledge, its presumption or its dangers.

Meanwhile the emotions discharge themselves. The neglected uncultivated emotions, do we not see them start up monstrous, indecent, in the form of table-turning, spirit-rapping, raising of spirits, howling and dancing revivalism, mormonism, shakerism?—Do they not enter the Church in the shape of rude mummeries and Boanergic bawling? (I speak not of Church High or Low in the bounds of decorous decency). Is there not a prurient hankering after gross gulp-down miracles, a yearning to make loaves into gods? Will no one detect in these the ill-used roaming emotions seeking rest and finding none? And what of intellect divorced from these emotions? Of science, the logical the consistent? Is she not already at odds with herself, split up into two sections; the one under contribution to support and pamper these rank excrescences of untended emotion; the other gradually weakening and sapping religious faith?

In these days of change and experiment, when the conflict of interests and classes has devolved an unprecedented responsibility upon the people, and the legislature turns with increased anxiety to the question of popular education, it is surely mainly im-

portant that we discern our educational short-comings, —that we detach ourselves from the bewildering medium we have spun about us, and get a clear sight of what our case is.

The better to do which, let us, if it be possible, step back into other and earlier civilizations, take notice of their means and resources, and of what they accomplished by the help of these, and how? Take the Greek period of civilization, with its limited command of physical science, its deficiency of telescopes, ignorance of scientific chemistry, its mechanics without steam-power, and its want of the printing-press. Then consider its astronomical achievements (however undemonstrated and unaccepted) in the fact of the enunciation by Pythagoras of the earth's orbital motion; of the true doctrine of eclipses, and their accurate prediction by Thales: its mastery of the metals evinced in the most colossal castings and in the tempering of instruments for cutting the finest dies and gems: its happy practical chemistry displayed in the fabrication of fictile ware adorned with imperishable painting: its constructive power in architecture as regards beauty, fitness, magnitude, and unequalled permanency: its unrivalled sculptural embodiment of the human and other animal forms: its perfect conception of man's bodily development: its invention of and exclusive claim to epic poetry: its dignified and at the same time popular drama—its union of music therewith: its metrification infinitely varied and refined beyond modern attainment: its discriminating appetite for the beautiful, not only in art but in domestic and everyday life: its science of rhetoric

and school of eloquence: and, lastly, in the presence of this highest cultivation and most generous development of the emotions, a no less earnest endeavour, despite the dearth of scientific material, to evoke and discipline the intellect (if not so variously yet as profoundly as this age can) by the study of logic and geometry, two sciences which Greek thought has bequeathed to us nearly perfect. In sight of such work done with so limited means we are fain to attribute to the Greek the possession of some intellectual or physical agency unknown to our modern civilization: a theory in some sort true though not in the sense we conceive; for whilst, from causes to be explained presently, we are unable to imagine how such or indeed any results could be attained saving by our own mode of procedure, and whilst we are consequently fain to furnish antiquity with higher gifts of nature, or additional material agencies, the fact obviously is that the Greek mode of procedure was essentially different from ours: that whilst we commission to the tasks we undertake an intellect cultivated and perfected to the highest point attainable, with no aid from our undisciplined emotions,—whilst we employ in great strength only one half of our human resources; the Greek sent into the field of human enterprise both halves, intellectual and emotional,—the whole man to do man's work with forces well balanced and harmoniously coöperative, though one of those forces was unquestionably less potent than ours.

That we are unapt to perceive this, is traceable to our habit of one-sidedness and to consequently one-

sided observation. We fix our eyes upon the fact and puzzle our heads about the means, expecting an immediate means to present itself, and, in fail of that, hastily imputing one. But if we could, somewhat less impatiently, examine ourselves and our inevitable (and not conventional or accidental) process of even scientific investigation;—if we would notice how an emotional intuition, a feeling, a predisposition, ever foreruns analysis in this or that direction, indicating the direction which analysis is to take, and saving us the fruitless labour of possibly infinite hap-hazard experiment;—if we would ponder (what we really experience) the fact of the mathematician, the chemist, the physician, each beginning his process with a feeling; saying, “Here is a property of the cycloid, I feel it though I have yet to work it out:” “I shall test for manganese, though I cannot exactly say why:” “This strikes me, before I investigate, as a case of mitral disease;”—if we pondered this initial domination of emotional insight, we should at once recognize the advantage of each thinker’s emotional faculties being lively to the utmost, not dead to, but conversant with, phenomena, and, above all, co-ordinated with intellect. And, next, if we would move away from the immediate fact, and, looking exploringly about, notice how the Greek took means for the culture of these emotions by imperatively ordaining by law that every man-child should be taught the art best fitted to evolve them concurrently with the intellect, and how our schools slight and discredit this art by making the study of it optional, to be prosecuted on half-holidays grudgingly, a

synonym of play and sport, permitting it to be taught by men of intellectual and social status invidiously below that of masters who teach dead vocables, that very language where in the Art-honouring Greek law was written!

And, lastly, if we look at and consider well the fact that he, who ought to make this art respected by the learned, is not able to associate with science and reason even the wretched little of it he teaches, and is but indifferently respected himself; while he who represented this art amongst the Greeks was a man respected by statesmen and philosophers, and whose influence, in the case of Pamphilus, the master of Apelles, seems to have exceeded that of a modern senator: if we weigh and meditate only this much, we shall see how the Greek had two strengths to our one, and why he needed no accessory *material* means to accomplish the amazing works he wrought. We shall see why Socrates and the Stagirite (who studied art and conversed in good faith and on equal ground with artist and poet) attained to a *comprehensiveness* of thought which the means and appliances of modern science have not enabled us to rival; how, in after-time, Da Vinci, endowed as he was with laboriously educated emotional susceptibility, as well as with all the knowledge of his time,—for he represents the most catholically developed humanity since the Greek,—was able (by no magical mystery) to anticipate some discoveries of Newton. And as we have seen even mathematicians, guided primarily by emotional insight, directed by this potent ally to new and prosperous tracks of thought, we shall discover the

cordial generous-natured Berkeley enouncing, in a nature-deserted brain-relying age, truths which that age (however laboriously it wrought, and with more than Berkeley's mathematics to aid it) by its one-sided process could not reach, truths which, after a hundred and fifty years of unremitted brain-toil, we are only just beginning to accept. Or again, when by authorized habit we have got to believe in Berkeley's metaphysics, as well as in his optics, then there will have to be at work both wonder and theory as to what lost treasure-heaps of *knowledge* he must have had access to, precisely as in the case of Da Vinci. And, lastly, when psychology, advanced to something like science by the help of Berkeley and our late lamented Grote, shall re-unite the unnaturally divorced intellect and emotions, revealing their inextricable relation, and that law within the law by which Accorded Antagonism, the blending of Hogarth's contrary curves, begets a trembling balance we call beauty; then it will be time for us to wake up in wonder, and ask how unlearned Hogarth could discern this? As yet we are puzzled: imagination is at fault, for imagination does not advance by intellect without the stimulus of emotion; and cultivated intellect can take no wholesome stimulus from untrained lawless emotion.

Occupied with the one-sided theory of mere intellectual culture, we must wonder some time longer at the achievements of many-sided Greeks, and a few here and there emotion-aided moderns: we must wonder, speculate, and theorize—we sagacious, self-applausive on our foredoomed conventional tramways,

moving to and fro as rapidly and regularly as our own traffic trains, in our own cuttings, under artificial barriers and embankments, excluding all prospect of nature, and moving with the same fixed faith in brain-motion as in train-motion, and at equal hazard of heart-disease.

And yet surely we might strive to shorten the term of our conventional bondage, to accelerate the slow-footed advent of the righteous union of these two divorced moieties of man's nature; to have some share in bringing what must arrive? For there is nothing in this world so humiliating as to be surprised and driven by events.

But what if such event be conditional, after all? and the irresistible elemental forces of our planet, that can put abrupt periods to human work, have benignly intermitted their conflict, giving man a long day to himself wherein to labour and vindicate his right to some commission in the universe, then surely it behoves him to be vigilantly conscious of all developable elementary power entrusted to him: behoves him that he make this trial time no holiday, pursuing froth bubbles on the current of events; the ballot, the last scheme for examining and certificating the million in "Social Science," interesting experiments as to what their brain will hold, regardless of their having aught besides brain—regardless of the final examination emphatically interrogatory of the heart. If this view chance to be the true one, then possibly to those races or nations whose "Educational System" has taken some thought for the heart with its emotions, and whose emotions thus cared for and nourished

are accessible to the beauty of God's handiwork, accessible to the conviction that lilies of the field are indeed more glorious than palaces;—to races or nations with this hearty conviction,—that final examination may possibly award more marks than to those of us whose intellectuals are orthodox?

For it is vanity playing fast and loose with the question of our destiny, irresolute whether the destined end be love or knowledge. If, pushed to extremities, we admit the end is love, and knowledge but *one* means of advancing it: that we cannot create love out of knowledge, love being an emotion of the soul; then why let this truth presently escape us, turning all our energy to the multiplying of knowledge, the emotions in the meanwhile neglected?—perfecting, polishing to the utmost all this armoury of knowledge to strengthen the array of emotions against a day of battle, only to find them on that day decayed, demoralized, or openly disloyal, passed over to the enemy under banners of darkness.

What nourishes the nobler emotions we all know; at least those of us who have been children of a mother. They are no such lofty aspiring things at first: they begin at the breast, and are next in the nursery, expanding in boyhood and in girlhood within a bounteous parental embrace, participant and happy in parental grace and charities, loving that which loves and comforts and delights. Love for parents without parental benefits enjoyed is a mockery or a theory, at the best.

That child who feels most acutely and completely the pleasures that a parent gives him, loves a parent

most profoundly and completely. Presently, as reason grows up, some tasks and denials, at first irksome, are discerned to be benefits, and please too: for the happy day of tasks well performed contrasts favourably with the craving weary idle day. Intellectual exertion has a pleasurable emotion annexed to it as self-consciousness awakens in the young.

Now if thus, and only thus, comes love for an individual parent we have seen, by identifying that parent with the sources of our pleasure and delight; will we think that love for the universal invisible Parent begins not in identifying Him with the source of all pleasure and delight?—or that one who tastes most acutely and completely a pleasure in the works of His Hand is not the one who will love Him most profoundly and completely? Or shall we think that this love begins in something more transcendental and occult than in pleasure? that the easy yoke, the light burden, and the giving His beloved rest, are neither sources of pleasure nor tokens of His love? If it were possible to entertain the monstrous supposition that there could exist a child of the Creator who had tasted no pleasure in this world of His creation, no delight of sense nor of imagination, do we conceit ourselves that such an one would, for promise of future happiness—which he could not conceive of as a thing to be or not to be desired—be apt to fall in love with earth or heaven? Our faith is surely not a blind faith: some grounds for faith are given; and the sin of unbelief is our blindness to the worth of what is given, as an earnest and witness of gifts to come. Then if pleasure (not the cause) is an indispensable

condition of love and faith, shall we expect a refined and discriminative, or a gross and sensual pleasure to be the fitting condition?—And, if the former, shall we render its attainment impossible by leaving the emotions crude and chaotic, insensible to a surrounding world of beauty destined to awake them into pleasure? Consider the bounteous hospitality wherewith nature prepares to entertain these, making the field-food, the cattle, the timber, the rivers, the floating rain-cisterns, all the mere means of man's living, amazingly combine, mysteriously harmonize into one rhythmic sense-ravishing vision. For you cannot sow a field with bread, but presently warm rain will transfigure the gray furrows with a million pearl-suspending suns sliding down sharp spears of emerald: and ere long the moon will be at work silvering every spear-point in the dusk: and then sun and wind will be jealous of that magic transmuting all to rippling gold. Consider what a prince and king of men he is who securely has the key to all this treasure. How easy to make poor men into kings of this high strain at the cost of a little human culture, and the foregoing of tramways and conventions. And then look at them, what they are, these poor workmen, their work done, clothed in broadcloth and the majesty of the franchise; with emotions stone-dead to the ennobling influences of a world of beauty; and finding vent in beer and in betting, in fighting and in wife-beating.

“But what remedy? what help? Full fairly would we see the poor labourer enjoying a higher human privilege: but his rough work must be done, and some one must do it: it will not sublimate his

emotions, neither has he picture-galleries wherein to study beauty." Now is it not the shiftless impotence of an age Shakespeare sighted, of an age "sicklied o'er with the pale cast of thought," an age of thought minus emotion, that speaks thus?—If Providence (we call nature) had not furnished a means of antidote to the inevitable necessity of hard labour and poverty, then indeed we might ask, What remedy? what help? But do not the fields, forests, and bird-resounding copses of the rich man furnish endless pictures replete with beauty which the field-labourer works in, and the city-labourer can survey with delight and solace, or with envy and repining, according to the extent of his emotional capacity? If there is one witness more convincing than another to the impartial distribution of good things, it is the persisting fact that the so-called rich man cannot surround himself with princely appliances of gardens, pastures, game-coverts, and hunting-grounds, without, willingly or unwillingly, but alike inevitably, building up a beauteous landscape for the gratuitous enjoyment of the so-called poor man, who, if his emotions be more lively and responsive than those of the nominal landlord, is the true lord and real owner after all.

For dearth of enjoyment is a reproach to human culture: the complaint is self-accusative, inasmuch as there is always around us much more of wisdom and beauty than our intellect and emotions are prepared to entertain. When Gilbert White withdrew from literary bustle to his home under Selborne Hanger, he was not contracting but enlarging his domain of thought and feeling. Here commenced the infinite

supply of pabulum for his mental and emotional activities. Here was his deep mine of wealth: but the poorest Selborne peasant, with heart and head awake, had access to the selfsame stores.

I met in a lane once, near Warwick, a man who was a letter-carrier, no scholar, but a creature of real culture, who had been for years in the habit of collecting wild-flowers and plants plucked hastily in his daily journeys, and duly sorted and arranged every evening. Now if these were not classed scientifically nor named according to Linnæus, they were clearly distinguished nevertheless, and left each its own impression on the mind of the collector, with possibly some other impressions beyond the reach of science. He told me his work was not finished nor was likely to be, for what he saw; that he never wanted amusement, nor cared to frequent public-houses. "I talk to these things," he said, "and sometimes believe, sir, they answer me."

He was a man of calm passions, we may say satisfied with gentle excitements. We may say, but cannot know this. Were Buonarroti and Cellini men of calm passions? that they were satisfied with the gentler excitement of fine art. Or was it that these three men, not as men but as boys, on some day or hour when the craving human activities were hungering for exercise, happened to gaze steadily and long enough upon beauty, whether that of human form or flowers, to find herein a happy field of exercise, and to be tempted to resort to it again? What is it draws men to the beer-shop or the card-table if not this appetite for action, this craving for excitement, as we

call it? And why, having tried it, do they return thither? Holbein was a man of full habit, with strong passions and a neck like a bull, but the pleasure he found in painting could restrain him.

Give the strong passions of these workmen of ours a chance of finding solacing exercise in the pursuit and contemplation of the exhaustless stores of beauty they and we all have access to, awaken, cultivate, and refine their emotions as well as their intellects, and do this when it is possible, when they are boys; the beer-house and card-table will decline.

But if we could see no manifest moral gain accruing from the cultivation of emotion as well as intellect, might we not recognize this duty in the mere fact of there existing in nature such a bountiful provision wherewithal to develope these emotions? If we look at nature's contrivances for supporting her human children, whether for housing, for clothing, or for feeding them, we never find these ends, however thoroughly attained, the sole ends that are effected by such means and contrivances; but there is ever an accompanying effect regardful of another human want. That chemistry which produces timber by assimilating the carbon of the atmosphere, is not solely mindful of timber but considerate also of man's lungs, science tells us. But the conscious emotions tell us that even this twofold attainment in behalf of our bodily wants does not satisfy the *all-seeing* Chemist's far intent: that the process from acorn to timber, from green blade to ripened harvest, is a long series of graceful and beauteous evolution and transition, administering to the soul's secret craving for what is

lovely; a process long because precious in its progress, ending one day in food and shelter for the body, but every day purveying finer food to the emotions; they witnessing to the eternal fact of beauty hanging inseparably on every silent step of nature; they witnessing, and intellect receiving the witness as intellect only can receive it, of emotions that feel and utter it, and arguing thence upwards to an unity of causation commensurate with such nature-pervading harmony. As if nature, that series of divine acts and utterances of words proceeding out of the mouth of God (by which words likewise man shall live) in the very act and process of bringing bread to man, said, "man shall not live by bread alone."

If this chapter has (without metaphysical terminology) succeeded in marking the essential difference between those pursuits which are familiarly designated the Arts, and those which are properly Science; has correctly referred these respectively to the emotions and the intellect, and has sufficiently shewn that all those surrounding objects we call nature possess an apparently infinite capability of evoking and nourishing both emotion and intellect,—having shewn, moreover, that the supply inferentially supposes the demand; my demand for emotional culture will in this chapter have been vindicated, and the Arts would appear to be the medium through which this culture is to come. Whilst to the reader who cares less to deduce a conclusion from principles, than to take matter-of-fact experimental evidence, if these reasonings fail to bring conviction, I would direct his sole attention to the concurrently prosecuted attempt at an

inductive process of argument founded on the social and religious condition of the age, with its tendency to gross superstition and an abuse of the emotional faculties; to the fact of the achievements of the Greeks being more than commensurate with their intellectual attainments, to the inferential evidence that they must have compensated scientific deficiency by emotional insight, and to documentary evidence that they did so by making art a section of their educational curriculum. Then to the fact that a poetic and dignified drama was appreciated by their lower classes, further evidence whereof may be found in the "Frogs of Aristophanes," where debates on poetic force and propriety of language (as employed by tragic authors) are introduced on the comic stage of Athens. Next, to an absence of such refined recreation amongst our lower classes, who have time nevertheless for low pursuits: then to the fact of inaccessibility to the influence of beauty being shared between them and the upper classes, and to the opportunity and capacity of the former for pursuing higher objects, as evidenced in the case of the letter-carrier. Further, to nature's provision of means for developing the emotions, being available to all classes; her regard to both the mind and the emotions even while she caters for the body; and, contrasted with this, our want of a like regard for the compound requirements of the classes we propose to educate. Finally, to the increased political power of the lower classes calling for increased moral culture or development of the benevolent affections, the more urgently when wife-beating, cruelty to animals, and murderous trade-combinations are in vogue.

In conclusion, I would submit that susceptibility to the influence of beauty would, by enlarging the sources of pleasure and happiness, increase the respect and reverence for things beautiful, set a higher value on a man's local surroundings, his wife, his children, his home, and his country, and help to re-instate that sentiment of patriotism which the cold calculating doctrine of mere money-making "material prosperity" is fast tending to obliterate.

CHAPTER VI.

THE VOID IN MODERN EDUCATION.—SOCIAL BEARINGS.

FROM what has already been said, it is sufficiently evident that the prevailing deficiencies in our present plan of education are deficiencies in point of Fine Art and emotional susceptibility to certain never-failing influences, derivable, though not always derived, from the survey of natural phenomena; beauty being the chief of these influences.

Let us now consider the effect of such educational deficiencies in reference more especially to the upper classes of our countrymen; more especially and directly though by no means exclusively, inasmuch as any *permanent* effect wrought upon the upper, must react shortly on the lower class, and *vice versa*. Nor is it perhaps sufficiently remembered, this inextricable complication of interests, and how the subject of education for high or low must be regarded under two aspects, and perhaps a third.

Thus if we suppose two prescribed codes of education for two classes of society, call them upper and lower, we must not expect to find, for mental and moral result, in the first, the effect of so much Greek, and Calculus, and so much "Paley," but we must

consider how the possession of all this by the higher will affect the lower ; how these latter will be regarded by, and will regard, the former in consequence of their owning these possessions : for how the possessors will feel in so regarding and being so regarded by the lower class is an effect which, plus so much Calculus, Greek, and "Paley," will conspire to make up the result we have to look for. What this last effect is we shall shortly see. For the present we have two elements in the teaching of the upper class ; the effect of the directly implanted education, and the effect of its outward action rebounding upon itself. Now in this process there has resulted to the lower class an element of teaching, inasmuch as while it regards the "unintelligible" as "so much Greek," it will regard the Greek-instructed class as afar off and inscrutable. The last of the above effects on the upper class is, then, its conviction that it is regarded as inscrutable by the lower class.

Now to proceed with our education of the lower class. Before we begin to implant our direct teaching, be it what it may, with the exception of Greek, &c., we find this class already possessed of one element of education : something has taught it to regard the upper class as inscrutable. We now add a second element, in the form, say, of useful but not very classic instruction, which is regarded as a rustic and ruder kind of culture by the upper class : and the knowledge of this fact makes a third element in the teaching of the lower class, who now know, in addition to their own proper teaching, that the upper class is not only inscrutably beyond them, but that it regards them as

rudely instructed ; while the upper class, in addition to their classical learning, learn also that the lower class views them as beyond its power of understanding, and indifferent to its humbler pursuits.

Let us admit that this appears an invidious statement of the case, that it makes no allowance for kindly feeling and generosity ; but then let us remember it is an average statement, and that this feeling of generosity is a feeling, an emotion of the heart, and that we must not calculate on a large average of emotional influences while emotional culture is neglected. But whatever it may appear, I contend that it is a fair and truthful average statement. I admit that each class, especially the upper, knows this prejudice is wrong, and disowns it in principle : but I affirm, that in a long average, each class does disclaim, debar, and, in some sort, proscribe the other : the workman discrediting the scholar for a want of "practical common sense," and the scholar scouting the workman for his "impenetrability to letters." Even the professions have a supercilious estimate of one another, and two different departments of the same profession are infected with a like prejudice : the pure physician disclaiming the "gallipots" of his dispensing brother.

If we are to legislate on education it is ill endeavouring to hide the facts that we mean to legislate upon, whether these be flattering or otherwise. It is better to look them full in face exactly as they stand and stare upon us, to consider the best means of meeting them, and to take our cue from those partial remedies already existing in nature rather than to

devise ideal antidotes; for there is no evil in nature which nature has not furnished rudimentarily the cure of: the evil being nothing but an undue growth or development of one element to a discordant and mischievous excess, which a proportionate development of its fundamental opposite will neutralize, restoring the harmonious balance: and education, which is nothing but development, if it would prosper, must be based upon this truth, giving up the crude hasty conclusion that there is any vicious *element* in the moral any more than in the physical world, or that it is one whit more desirable to banish any one of the passions than to banish any one of the gases. An excess of wrath or of carbon in either world is death, but we know, from God's wrath, as well as man's, against *that excess* we call *cruelty*, that wrath is not *elementarily* vicious any more than carbon is, and that each goes to make up the substance of our moral or physical constitution.

What then is the *natural element* which will antagonize a mental prejudice arising out of class education, or that different sort of mental development which accompanies a graded civilized society?

We have already seen the "generous emotion" shocked and scandalized at this prejudice, and so far we recognize the antagonizing or counteracting element in the emotions. And if we stop to ask how arose the prejudice, we find it resulted from partial or one-sided development, development of mind only, without an accompanying development of "emotion," which is the first word that rises to the lips while we are seeking a remedy for the prejudice. There would

be no danger of our minds, ever so concentrated upon our own pursuits, being insensible to the importance of others' pursuits, if only the emotions were keen, alert, and healthy. Reason, indeed, might *see* the necessity of there existing other pursuits than ours; but the bond of human brotherhood will not be maintained by the mere *seeing* of a necessity for this or that, but only by the *feeling* of a common benefit conferred. We must rejoice in the conquests gained by others, and not merely coldly admit that they are conquests. We talk now-a-days of "widening the bonds of social amity," but we can never be the poor man's hearty friend till we and he meet on *some* common ground and participate some common pleasures. And now that a multiform civilization, many-graded beyond all precedent, with thousandfold diversity of pursuit, calls men so far away from one another's paths, it is more than ever needful that this common ground be held, held for all classes, and cultivated. And this common ground is the emotions.

Our educational mistake is, at present, not the aspiration to have the labouring class participate in the advantages and enjoyments of the wealthier class, but the ineffably absurd supposition that mere intellectual culture can effect this. Could we give the poor man as much Greek and science as the universities command, he would be of all men the most wretched, a realized Tantalus with an artificially aggravated thirst, the means of assuaging it at hand cruelly near, and his doomed position ever thwarting his desire: when he would be reading Æschylus, dissecting a human brain, or ascending with Mr. Glaisher

into the clouds, having to go down into his coal-pit or to swelter in a factory, till he return home worn out in brain and muscle to dream of educational blessings. And yet we hear of no recantation of the mischievous error; rather of a sanguine perseverance in it. The postulate, "so much learning, so much happiness," once conceded, there is no will to retract it, no thought of such a thing being possible; no conception of another means of happiness: but, in sight of failure upon failure, only a renewed call for learning. Give, give. Give more. A little more will do it. More science, and, it must be, a little Latin? That failing, more Latin, and some Greek perhaps? Greek and Latin both failing, some Hebrew and some Sanscrit, or mayhap Metaphysics and Psychology? Then down bravely, thus equipped, into your coal-pit, and defy day-long darkness and choke-damp.

That we shall be turned off this dismal dangerous tramway of convention is most certain; but that we shall ever of ourselves willingly turn, seems doubtful. "Free discussion" (the thing all are pledged to), while one dominant idea has possession of every human brain, is a thing impossible.

When in the fulness of time it shall occur to some half-dozen "people of importance" that the now never questioned postulates, "the more brain-work, the more hand-work, the more locomotion, and the more commerce; the more happiness," were not postulates exacted from mankind by Mosaic, Christian, nor Pagan authority: that neither Confucius, nor Socrates, nor Bacon ever proposed them nor anything like them, but that they gradually grew into vogue very re-

cently and none knows how; that they are as open to question and debate as origin of species, wide or narrow skirts, or any other fashion thoughtlessly dominating the hour: then free discussion on the means of human happiness, and the fittest sort of education for supplying that means, may commence.

Meanwhile let us hope that incessant failure of experiments tried in one direction will at last, by wearying us out, recommend a new mode of procedure. Then suddenly we shall rub our eyes and wake, see the abundant means at our disposal which has been neglected, see the characteristic deficiencies of the age all pointing in the direction of one omission, and ask, with Berkeley, if nations, like individuals, are not sometimes possessed with mental blindness.

We all agree that there is a hiatus in education which mere intellectual culture cannot fill up: we admit that the age's efficient spur and motive is neither love nor glory, nor any single virtue, but the putative parent of these, Gain: we behold our very manufactures avoided as specious deceptions, "made for sale," and the name of our central factory become the synonym for what is base and "Brummagem:" we see embezzlements, defalcations, bubbles, organized unions for the doing of murder, coexisting with mental attainment more than sufficient for some virtuous ages; we see this growth of evils growing greater in the deterrent (?) presence of a hitherto unequalled growth of intellect, and an accompanying clash and strife of class interests resulting from that enlarged education which, according to our theory,

was destined to reconcile these diversities of interest, widen the bonds of amity, and obliterate the prejudice of classes. We find, in short, in the presence of the full swing and sway of intellect, the benevolent emotions of humanity weak and worse than impotent, an irritating shame and a reproach.

If then our system of education, our process of brain-tillage, will not help the emotions to fructify, why not direct our husbandry at once to the emotions themselves? If we were as free to examine and to choose here as we are in the raising of our crops, should we not discern the necessity for two fields of cultivation? That the human energies have two fields of exercise, a mental and an emotional, is surely no novel announcement. We are cultivating one of these exclusively. And though our next, and, let us hope, our last resource, in this direction will be an attempt to manure this field with moral philosophy, no emotion good or bad will ever germinate therein for all our toil and ingenuity. Socrates and Plato and Zeno and Seneca and Paley will not help us much. The four first brought but scant harvests to the ancients themselves, who were more emotional than we, and who, in their susceptibility to the influences of physical beauty, degenerated into a final nature-worship and torpid pantheism, just as we, from an exclusive trust in mind, and neglect of emotion, are petrifying into rationalism: while Paley is science in modern dress, and only better than Seneca where supported by Christianity, which unhappily he makes a feint of supporting.

But what is Christianity about? it may be asked.

I answer, That her field of operation is the heart and the emotions, that Christianity can make a man holy, more holy than any agent ever made man; but she cannot make holy a half-man, a brain, the mere intellectual moiety of humanity, however that moiety be magnified by science. But there is your field of the emotions (it is replied) quite open to Christian cultivation: does this field demand other or better culture? Would that our Christian brother would stand fair and firmly on this ground, nor shift it! remembering, only, how Christianity never proposed to supersede culture either of intellect or of heart; how it comes in aid principally of the latter, not commencing it (culture of the heart) but prerequiring that the soil be not stony nor hopelessly weedy, and foretelling the vain issue in either case. St. Paul could open Christianity to the Athenian whose emotions, cultivated and not dead to nature's beauty, had darklingly discerned an unknown God somewhere under and supporting this "nature's beauty." That Greek soil was ripe for his sowing, and the Fathers of the Church were the harvest. Come let us prepare the soil, my brother: see that our sons entering their College and College Chapel have their emotions accessible to "whatsoever things are lovely" as well as learned; that the bounty of nature has not been wasted, but the lily of the field duly esteemed, and the beginning of love within their heart. Without this preparation, be assured the Christianity which they learn will be, at most, a brain-full. That poor moiety of humanity we have dwarfed them to, the Sciential, will only take in and digest that poor moiety of Christianity,

the Doctrinal: it will be of the reason rational, a formula to be stated in Algebra.

What hinders that we get to work at once? Nature yet patient, is still waiting with her help, with sunsets through forests grand with pine, with keen ether-cutting crescents and star-clusters—with the beauty of fields ripe with bread. Holds she not fair forms of ferns, weeds, and flowers, mosses, minute lichen and outlines unsearchable of travelling cloud and mountain?

To learn the language of these forms, and, most of all, to feel the deep mystery of their beauty, in common with our fellows high and low, to whom nature gives these for a birthright of humanity; to hold, at least, this one common ground of human pleasure in companionship with all men rich and poor, and realize this common tie of brotherhood that embraces us, will do more to associate the human family than all the fulsome flattery of the age which insults the working-man with transparent mendacities and adulation he intuitively smiles at and despises; which widens, instead of closing, the social gap. Burns, in his poverty, found out that he and his class had in possession

"Joys that riches ne'er could buy,
And joys the very best."

And found also that "Edinburgh gentry," for all their public recognition, frank, affable, familiar as our own public talk to our working class, would still keep their vaunted lion at arm's length, and had no more, but much less, sympathy with him and his pursuits

than had the poor pet yowe he left at home in Ayrshire.

It is surprising how clearly we feel and know that it is rather sharing in some common enjoyment than sharing in the same field of knowledge, that begets and cements friendship amongst ourselves; and yet, while seeking some common bond of union with those beneath us, we omit this tried and efficacious means, and trust solely to another not seldom found subversive of the end. Surely Social Psychology (if one may use the term) has advanced greatly ahead of other branches of Psychology to make it such a certainty that what binds together the unlike members of one class would necessarily fail to attach those of other classes—that the fundamental springs of human sympathy are so obsequiously servile to convention!—that the inward cry for unreasoned friendship is not of nature after all, and that “one touch of nature” does not make “the whole world kin”! The more singular this when, in cases of impending national danger, the populace are confidently invoked with reminders of common enjoyments and common happiness, with the assurance that we actually feel with them, and not merely for them, in distress!

Seeing these things are so, we would call more attention to the claims of any means whatsoever for establishing at least one basis of mutual intercourse and sympathy between classes—that of natural beauty not the least—and suggest, in the words of Bacon, that “it would be tried?”

Some of the effects of that trial, on the lower class, I have already endeavoured to anticipate, and propose

now to consider what influence a wider and more sincere sympathy with natural beauty will have upon the higher classes of English society, who at present are confessedly below the emotional standard of æsthetic culture abroad.

For let us take a young English patrician of good parts, of classical attainments irreproachable, not unversed in science, and dowered with that authentic stamp of gentlemanhood which our universities confer on the seeker of some of their best things. Take, I say, a fair or somewhat over-average specimen of the class, accompany him into the world he is about to take a high social place in, and you shall find him painfully and consciously deficient in one particular which would seem neither trivial or unimportant in his position, if the Arts which ennoble, distinguish and vindicate an almost princely command of riches are indeed of any worth. Consider him, the last consummate efflorescence of the ages, preparing a fitting home and nursery for a new aspiring generation, studious of those influential and ennobling surroundings which constitute the atmosphere of domestic life, which, beyond all *special* teaching, is the subtle initiator and nourisher of noble thought and feeling in the young denizen who breathes it: consider him conscious of the importance of these aids and influences, solicitous that no discordant forms and proportions, no absurd and discrepant appliances of means to ends, in the home, its furniture and decorations, ever inevitably present and unconsciously swaying and developing ideas, feelings, and propensities, should blunt, mislead, or vitiate the unfolding faculties of the young

inhabitant: consider him, as such an one unquestionably is at this stage of our æsthetic philosophy, harbouring a profound conviction of the importance of these aids to infant (and adult) culture, and at the same time so profoundly conscious of his own inability to choose and order these things, that he, who ought rightfully to know and judge better than any other the æsthetical domestic requirements of his class and kindred,—he who ought to represent the highest effluence of his age's refinement, he abdicates his natural position with impotent misgiving, letting it devolve on an architect, an upholsterer, a picture-dealer, each of which ought to be his debtor for insight and direction in a new and higher order of demand, and each of which, at best, will equip him in such sort as contented the wants he is naturally in advance of. Is it not melancholy to follow him through a gallery of painting and sculpture, afraid of committing himself to an opinion of what he likes or dislikes? or ingenuously asking some friend, whom he fancies a connoisseur, to tell him what he ought to admire?

Of all humiliating objects in this world, surely one of the most sadly humiliating is to see an otherwise frank and truth-loving man watchfully waiting on and sounding the opinion of a so-called critic in order to know and to tell how a work of art affects himself! Is it faithful, honest, or honourable, to feign and avouch, before the masterpiece of some truth-devoted artist, that you are impressed with a sentiment of pity, of awe, or of admiration, while you are impressed with no sentiment at all, but are awaiting and worming

out the sentiment of some one else? Is this decent in the face of truth? Is it a wholesome sphere of exercise for a young patrician beginning his social duties?—of a just finished gentleman, the last consummate fruit of social progress, beginning to utter himself to society? Imagine him—it is the fate of thousands—wearing this uneasy ugly mask to the end of life, and ponder the consequence, namely, a sapping of the foundation of his veracity in other things, or, if he escape this almost inevitable result, a confirmed opinion on his part that fine art is an arbitrary whimsical pretence dogged by temptations to insincerity, and a nuisance to be tolerated only in compliance with a recognised demand upon his station.

And why should this be? Why should society be made to put on this odious aspect to its willing friend and benefactor? Why should he be fated to endure and to despise it?—to regard it as an incorrigibly hypocritical inheritance which he succeeds to and must transmit? But if we have no bowels of compassion for him, and no wit nor heart to interpret Byron's sincerest utterance, "I wish they knew the life of a young noble," why should we go on securing to ourselves—and at the hands of the vanguard of society—sorrowful perpetuation and reinforcement of a conscience-corroding hypocrisy?

Why this should be, no oracle can answer: why it is, needs no oracle to tell. A lie once duly admitted and recognized will breed and multiply; and so long as we maintain the parent, the progeny will not appeal in vain. On that day when, caring not honestly for art, we made a feint of admitting it, ostensibly to

banish a yawning hiatus in our education, and admitted the name for the thing, a pretence to be sanctioned and connived at, for the laying of a scandalous reproach which we dared not or cared not either honestly to bear before the world, as an honest nation of shopkeepers, or honestly to try to get rid of —on the day we enacted this deceit we initiated the whole system of tangle-rooted hypocrisy which strikes downward blighting through the (once fertile) field of English taste.

To one who believes that all things are disjunct and independent, self-originated, or the creation of many makers, there may appear no link between the physical and moral world, and no danger of fallacy in the one inducing fallacy in the other: but to such as discern the gradations and “nice dependencies” subsisting throughout the universe, physical, mental, emotional, and moral dependencies; a sanctioned and practical insincerity in art will certify a pervasive insincerity defying all human limitation.

And, quitting this graver consideration, really it is lamentable to think of the contrast of the ages we call Dark, with this “enlightened time” we live in; to think of the single-minded sincerity that animated English art in those days of arduous struggle; days dark with dark deeds and dark passions, but, with what light they had, very single and strong, and striving against darkness to the death: to think of their wise builders and cunning carvers recognizing as we cannot, or do not, the wealth of beauty where-with this world is dowered, discerning the spirit of grace and amiable harmony in every native growth of

wood and field ; feeling how righteous and acceptable it was to receive and enjoy this gift ; and offering the firstfruit they reaped of that harvest in the temple of the all-bounteous Giver ; offering not the very gifts again, the beauteous forms and fashioning of His Hands as they found them, but what *human result* these had brought, *man's version* of nature thus interpreted, and not rejected, an earnest of her design fulfilled.

For it is not the exact copying or actual imitation that affects us in the leaves, fruits, and flowers of Gothic ornament (which has not, and was never meant to have, this quality), but the irresistible assurance it inspires that the archetypal forms which suggested it struck deep into the mind and heart, awakening new thought and emotion, informing these with wisdom which is beauty, with sympathy and harmonious consent : it is the utterance of this nature's effect on human nature, the evidence of man's spirit, so quickened under nature's influence, informing human handiwork with unconscious wisdom of design like unto nature's, but for the compassing of very human ends ; for the carrying of arches, roofs, and galleries, not the bearing of boughs, fruits, or flowers.

If a church, with its Christmas decoration of holly, holm, and ivy, however cunningly arranged, could have all these exquisite forms of nature's growing permanently fused into its stone fabric by the petrific touch of an enchanter's wand, as Scott fancifully suggested, there could not be a more anomalous result, nor one more abhorrent from the spirit of Gothic art.

So certain is it that nature* is for man, not man for nature.

And can we think that this points alone to art? Do the critics, the connoisseurs, suppose that the beauty which attends on nature's processes was ordained to the end that churches might be ornamented, statues wrought, and pictures painted? That these are the true end and outcome? That these things were designed is most certain, since they are; but that the accomplishment of these effects was the end of the Designer is a conclusion scarcely consonant with the tenor of His working. The imperishable glory of a work of true art is not in itself (alas, too perishable!) but rather in the fact of its human authorship witnessing to so much human culture, recording so much strenuous search and perception of the infinite beauty in the world: not even in its being a faithful transcript of that beauty (were that possible), but in the fact of its declaring that a creature, made with a capacity for beauty, has awakened to a knowledge and sense of its existence, and has benefited by its operation.

For the destiny of our race is not fulfilled while anything adapted to develop human function has not been acknowledged and employed, while any hiatus in man's potential sphere exists. And of all the paths towards human development, that path which most clearly claims a *native* origin is the one which has the best claim to be followed by each nation. I would say—with all deep reverence for Greek art,

* Nature is here used in the ordinary restricted sense.

the more emphatically since Greece disdained a foreign model—that it behoves us most of all to value and most of all to cultivate assiduously those germs and peculiar growths of excellence which characterize our early English school; and therefore, it might be, to the comparative neglect of Greek models. Now one path to success we had the merit of originating. Struck into spontaneously by the very inward spirit of Christian brotherhood and devotion, it led to a result perhaps never before attained even by the more perfected, but more exclusive, antique process.

After some heart-earnest ecclesiastic had so far completed his design that it awaited the elaboration of details, and in some sort suggested them, he called in the humbler brethren to offer what gifts of heart and head they had a will to offer, to utter themselves, their joys and sorrows, fears and hopes, their conceptions of eternal bliss and eternal woe, in the walls of the house of The Eternal. And thus, in place of the supremely perfect impress of one soul, even that of a Phidias, we amassed a varied world of human feeling and human utterance exquisitely individual and picturesque, less classical than the Greek but less monotonous, not discordant, because an utterance of humanity genuine from the heart unto one end. We were doing a thing Greece had not done, but were doing it in virtue of a law and principle that actuated Greece when she tutored intellect and emotion side by side, and trusted their joint working and natural dependence would issue in some noble result. We carried the principle farther, and trusted that the eternal union and natural dependence, not of philo-

sophical but of Christian brotherhood, would issue in harmonious order. The thing was new, but the principle was old. It was the recognition, in the one case, of the claims of all kinds of human faculty, in the other, of the claims of all ranks of the human family—The disregard of no created thing.

Thus we see how a new religious dispensation, operating in a partial civilization, led to a new event in art. And it has been remarked that new professional discoveries not seldom come from non-professional sources. Help comes from without; one thing reinforces another; isolation means effeteness.

Hardly then can it be asked, What our patrician, our so-called "independent" man, has to do with the subtleties of Greek and Gothic art. It might indeed be asked if he were independent absolutely: but the very isolation of his rank, signifying the necessity of a link between him and ranks beneath him, declares the fact of his dependence, and of a dependence upon him. And note how the link that ties him to his special sphere of refined enjoyment, and seemingly segregates him from the mass, is really fundamentally the selfsame emotional influence that restores and claims him kindred to it: for as, while exalted intelligence would separate us, we have seen the emotions step in ever to re-unite us, so these very emotions are the basis and foundation of those arts which administer emphatically to the refined requirements of wealth; the exalted position of the misnamed independence being a voucher of its dependence upon something to support it.—The word 'independent' being a solecism save only where it indicates nonentity.

But why, with this reciprocal dependency between the Arts and the Class we are treating of, does it happen that this Class, as we have seen, is not benefited but actually afflicted by these Arts? All natural appliances and means seem to be at hand to avert this issue, and yet it happens to be the one issue afforded us. By what perversion of natural design does this occur? Surely by some artificial breaking of contact in the natural circle of things comes this shock, this unlooked-for violence. And is it far to seek?—But say we turn our search rather in another direction, and look for an opposite result; that which attended an otherwise ordered education, an education not exclusively conversant with vocables and science, which are only man's names for natural things, and his gloss and commentary thereon so far as his observation goes. If we look to an education wherein the things themselves were studied by the learner, when there was very little terminology, and very little gloss and commentary for him to get by heart, and he had indeed to look nature in the face, and (the better to acquaint him with her works, and possess them as much as possible) to trace their forms with eye and hand, and get out of them what he could for heart and head; sincerely contemplating and enjoying them in virtue of his own proper puissance of mind or emotion, not at second-hand through some one else; do we find the thus educated patrician abdicating the privilege of a spectator of God's works, and asking a creature called connoisseur, learned in the etiquette of taste, to tell him, for fear of confusion, what he ought to pretend to like and what not? Do we find

the thus trained patrician wanting in love and reverence for art, and regarding it as a painful hypocrisy? or avowing it the sphere of his most exalted pleasures as adding something even to his religion? * And then, in behoof of the gap, the hiatus between him and those in worldly circumstance beneath him,—What bridges this gap? What proves the poorest free-born Athenian an equal in gentlemanhood with the richest? What is the common bond of brotherhood? What the badge of it? A common education in the Arts. Nay, so assured are these egregious heathen that appreciative recognition of God's works, in their beauty as well as wisdom, constitutes an inalienable claim to human freedom that their laws prohibit slaves this accomplishment (which they dared not divorce from equal rights), while to those gifted prophets in art, the profoundest probers and fathomers of the mysterious beauty of creation, the same heathen law, to avow unmistakably its estimate of such high function, grants special privilege,—immunity from taxation, and state privileges.

Do we find, in this state of catholic human culture, the Athenian patrician a connoisseur's puppet, uncertain about his own tastes, inept in the commission of public works of art, impotently led to appoint ignorant hands to the execution of high national tasks? Do we ever find his public works miscarry, failing disgracefully, as ours, through the appointment of inefficient artists?

The answer is, unconditionally, never.

* Quintilian has this expression in reference to the works of Phidias.

Now look at our Fine Art Commissions. We have two lawyers, two artists, a poet, a Literatus, a man of science; all good men in their way very possibly, but all utterly incapable of mutually understanding one another, and of rational harmonious coöperation.

For the artists, half-educated and shy, can not confer with any of the rest; the man of science can not see what he can do; the poet bemused stands (craning over a hedge) looking scared into a field quite strange to him; and lawyers and Literatus, who can talk on any subject known or unknown, and know nothing of this beyond the mere product of prattle, have it virtually all to themselves, and proceed to choose some "safe man" praised in the Ding-Dong Gazette for his last funny failure, one who is just a representative of painful mediocrity, at best, but probably a clever job-contractor unexceptionally recommended as "competent."

But this, if it be so, (it may be urged) is not in point, inasmuch as the moral integrity of the committee, and not the æsthetic deficiency imputed to it, is in fault here. Softly awhile, and patience. The æsthetic deficiency is imputed unquestionably: but is there any moral delinquency imputed especially to said committee? By no means. In the case of utter suspense and ponderation as to whom they should select, with the artist-element probably at odds, the poetic element, like the scientific, mute, and individual æsthetic incapacity on the part of the final arbitrators to throw a scruple's weight into this scale or that, is there any delinquency, mental or moral, in suffering friendly recommendation, and the faith that comes of friendship, to turn the scale?

No. These decisions are in most cases *proximately* honest, as honest as the *remote* dishonest principle underlying a dishonest education will permit, a far-off but fallacious principle that will bear fruit of fallacy soon or late, not only fruit of failure and deception as to art, but fruit of misconception, as in this case, touching moral responsibility of man to man. For no sooner is the bad result seen, and the whole thing a manifest miscarriage, but the committee is accused of malversation.

(Wherefore those piecemeal moral philosophers who think untruth in art "is one thing,"—a thing to stop and go no farther,—should ponder this. And remember this is not a theory.)

Yet here is a well-willing endeavour to arrive at an equitable decision. With art, poetry, science, law, and literature, we *ought* to be, if we *are* not, able to meet the requirements of the case. Why we are not has sufficiently appeared. But imagine the representatives of these high callings each with a capability of communion with the other! Concede that the man of science, for instance, knew sufficient of the subject under discussion to be able to apply what he does know, and to coöperate with his colleagues in real earnest. Let him have received only as much school knowledge of the proportions of his own body as his nurse might possibly have taught him of the proportions of weights and measures, pots and bottles, and he would then sufficiently understand and back his artist-colleague opposing the election of some sculptor whose proportions have run into abnormality demonstrable by inches. Imagine the worth and

weight of an anatomist or a Fine Art committee, if he could but apply soundly and practically the anatomy he knows to fine art!—if he had studied his nerves and muscles in behoof of grace, and beauty, and expression, as well as looking to those other results which his science restricts him to at present. He would not only be able to help art, but himself also, to a knowledge of the uses of some things he now fancies “useless.” But to do this presupposes the need of some early training and perception in the matter of expression, grace, and beauty. And this need must be supplied at the peril of the coming generations.

For we cannot investigate a half-dozen steps deep on this subject, but we encounter some moral or political evil resulting from the neglect of one set of human faculties from this modern hiatus in education.

CHAPTER VII.

THE VOID IN MODERN EDUCATION.—SOCIAL BEARINGS.

FOR pass from the undesirable, uneasy independence of the highly (but utterly one-sidedly) cultivated and polished male patrician, and turn to the most bounteously nature-gifted woman in the world, our English lady of rank. Contemplate if we can without sorrow such opulence of grace and all charitable devotion, overmastered by the tyranny of fashion, arraying herself, as by fatal impulsion, in a garb which shall starve a thousand families. See her shudder while she reads the tale of this distress, and, thereupon, studying and striving to undo the disastrous effects of the thing which she still continues doing like one infatuate and possessed. For this wayward despot Fashion has (say) prohibited the wearing of ribbons, whereupon a worse than papal excommunication awaits any English woman who dares to disobey, and a cry of starvation is articulate on every wind, from ribbon-weaving Coventry, that city of the legend of Godiva, whose citizens of old were rescued from starvation by one woman's noble scorn of fashion, and who starve now from most women's abject prostration to that idol. I say *most* and not *all*, because one woman here and there has

pity and ruth even able to defy that idol. But was she not scouted as a monstrous "naked Godiva" who dared to dispense with the barbarous inflated globe of crinoline? Dare we to conceive of what must be our contempt for taste, propriety, and artistic discretion, when men endure and approve that their wives and daughters transfigure their divine image, transforming their beauty into hideousness, obliterating the natural flexures of the body and the visible grace of movement by a tumid dome of skirts, a waist up to the chest, or a pair of balloons at the shoulders or elbows, or anywhere, as chance may determine? For it is chance and nothing else. There is no pretence that these enormous outrages upon the design of nature really improve her appearance; for we readily admit that, if fashion decree one thing this year and its exact opposite next year, each will be right and becoming at the time that fashion says so. Yet we do hypocritically impose upon ourselves the belief that we *look* better in the fashion than out of it; that the eternal laws of grace and proportion change every month with the fashions!

I am aware that it is a less heinous and safer thing to antagonize a nation's religion and government than its fashions; and have no mind to tinker at amending these last, and no joy in seeing them improve, knowing, as one does, that any improvement here is merely accidental. What I would, however, call attention to is, first, the baleful effect of sudden change of fashion upon the labouring population employed by manufacturers of textile fabrics, as well as to the cruel press and late hours of overwork inflicted on the makers

up of these fabrics, in consequence of such sudden change: second, to the significance of our stolid indifference to propriety and beauty of form, in arraying our persons, as an exponent of the uncultivated and atrophied state of our emotions in behoof of all natural beauty and grace, an exponent singularly conclusive, exhibiting us, as it does, so insensible to the beauty and expressiveness of the divine fashioning of our bodies, that while necessarily protecting them against cold, etc., we not only clumsily and unnecessarily conceal much grace of movement, but gratuitously strive to *alter* and *misrepresent* our very make and capability of motion, hinting joints where no joints are, and cancelling that expression of truth in the image of which we were created. And, in addition to these two facts, the one of fearful human suffering, the other of fearful neglect of human culture, I would call attention to a third, namely, the ignorant or impudent assertion, that fashion "makes good for trade"; only exposing this sophism without any hope or desire to modify or abolish fashion, the doing of which would be in all respects as vain as doctoring or removing a malignant tumor the cause of which remains intact.

But to deal with this saucy sophism.

Nature has fashioned us so variously, so individually different, that to dress well, or in harmony with individual requirements, each individual would dress differently, and so create the largest possible demand for variety of fabric, design, and workmanship. And as personal characteristics, and consequently their requirements, could not suddenly change, there could arise no suddenness nor hurry in the demand, and no

sudden prostration of manufactures, seeing that all change would needs be gradual, and all demand constant. Now let us see what fashion does for trade. First, it ordains that all people of fashion shall, for a season, dress very nearly alike, and consequently employs, though with great pressure, a comparatively few branches of industry: second, it may leave these nearly unemployed, and make sudden demand on other branches: or, third, (as often happens) it may go on multiplying one sort of demand for a long period, gradually drawing industry into one channel, and when multitudinous "hands" are pledged irrevocably in that direction, then suddenly and utterly give up the demand to the ruin of manufacturers, starvation of "factory hands," and general disorganization of industry. So that it is now coming to be acknowledged that the only remedy for these shocks and convulsions will be the qualifying labourers to do all kinds of work—a final reversion to the more barbarous principle of diffused from that of specialized labour, induced originally, as we have seen, by a stolid and barbarous insensibility to the refining influences of beauty as evidenced in the act of disfiguring and misrepresenting (like savages) the fashion and intent of our bodies.

So far, then, is fashion from helping trade, that it not only fails in the low object of money-making, but is, in its direct operation, a fruitful source of bankruptcy and pauperization.

Now let us look at its indirect working in respect of morals.

Formerly, amongst the Greeks and Romans, and

in times mediæval (as under the Edwards) when dress was, with some exceptions, suited judiciously to the demands of personal appearance, it naturally led from prosopoleptic distinctions to distinctions of class and calling, and not only (æsthetically) to picturesque contrast and variety, but likewise (intellectually) to intelligible and useful indications, so that the dress of a carpenter or baker, which bespoke his calling and position, would, if tastefully adapted, win him what credit and respect it could rightfully command ; would, in short, tell the truth of him ; would not and could not disparage his appearance as not being so grand as a physician's (that being out of all question) ; would not for a moment persuade him he was a gentleman, and would not lead him into the vanity or extravagance of aping one, but it would be true to him, and an index of truth to others.

But now, when this is all changed, and dress is no longer a tasteful and judicious adaptation of drapery, and the fashion of dress, arbitrarily decreed, is considered *in itself* a thing desirable without respect to taste, judgment, personal discretion, calling, or social position ; when it is considered for its own sake a good thing to be possessed of, and when this view of the matter is sanctioned by the conduct and opinion of the higher classes, is it to be wondered that people of all classes strive to the utmost to obtain it in its exact perfection ?—that the courtier, the physician, and the carpenter go all alike clad in broadcloth cut to the self-same pattern, long legs and short legs, broad shoulders and narrow, a dismal black mass of monkeys aping, each one, the highest ?

Could it be otherwise than thus, under the conditions, even granting that our moral and æsthetic potentialities were higher than in the time of the Edwards? Would we have the people learn and take pattern of their superiors, or no? They are worthy of us in all respects. We dress beyond our means: so do they. We array ourselves as nobles: they as gentlemen. We dress thus because we must: they act Amen. We pay tailors if we can: they act So be it.

That the whole frightful fraud and delusion originated in the abdicating one of our essentially human attributes, may not be obviously apparent, but that, by neglecting and starving or paralyzing our emotions towards beauty, we have arrived at the possibility of maltreating and disfiguring the most beautiful product of creation, our own bodies, has been evidenced. The only question that remains is, Why did we avail ourselves of the possibility? And this is the answer. The emotions being an essential part of humanity, they cannot be extinguished but with life. Starve them in one place, they fatten in another. Paralyze and oppress them where they sympathize with reason, they grow vigorous and start up in the company of unreason. Whence the grisly and grim disguises of the savage whose disproportionate development of the combative emotions into cruelty, revenge, and the pride of being horrible, explains his predilection for war-paint, scalps, and skulls. And similarly with the civilized man whose æsthetics, or reason-allied emotions, have been neglected or suppressed, we have other emotions (that society may tolerate) presently unfold

themselves to excess, such, for instance, as the impatient passion for novelty, at any cost, with its grotesque extravagancies as to form and fitness ever antagonizing the "vapid," because unfelt, simplicity of nature, which qualities characterize the fashions of our day,—with novelty mainly for their motive, and chance, availing itself of this or that vanity, for their immediate and absolute arbiter.

If a popular prince, earl, or author even, to veil some deformity of limb, adopt a loose drapery for the leg, all people presently will go into leg-lags though their limbs be as straight as Apollo's. Or say, on some public occasion, that majesty happen to wear blue, blue straightway is the popular colour for dark, pale, and florid indifferently. For (as hitherto remarked) here, as elsewhere, we have a final and absolute belief that things are in themselves right or wrong: not that they are relatively right or suitable, relatively wrong or unsuitable. And the word Proper has lost its old proper meaning, being used now not to signify appropriateness but absolute and unconditional rectitude.

Though it seem not absolutely in point, there is, in an essay like the present, a frequent necessity for comment on the habit of thought and feeling of the age, wheresoever and howsoever it reveals itself; for it is to this habit of thought and feeling that we really have to look while searching for deficiencies or excesses of education; What is it we possess? and What is it we lack? being in short the whole question. Neither do I see, if our education is really unhealthy, how we are in a condition to answer these two questions

off-hand, any more than a sick patient is able to spontaneously prescribe for his disease. He has still, very probably, a morbid appetite for something which is now deranging him; he is possibly importunate for a further and larger supply of that cause of derangement, just as we (quite possibly) are now demanding a further and larger supply of that sort of education which we have tried up to this point with at least problematical benefit. The hankering demand of our patient is assuredly no proof of its wholesomeness. And I cannot just now see that our present hankering after more of the old sort of education, with the suggested project of extending it and making it compulsory, proves anything beyond the mere fact of that hankering being a very strong appetite.

If we would really know whether this strong appetite is healthy, we must learn first to lay it awhile to sleep, to give up all foregone conclusion on the subject, as to what are the best *things* to teach; and rather to watch narrowly our shortcomings and successes, the failures and the fruits of our present system; and to detect in their excess or deficiency the symptoms of *partial* or *entire* human culture, the evidence of our elemental powers or faculties being developed harmoniously and catholically, or discordantly and partially: for that this *harmonious development* is necessary, is the one fundamental certainty at present.

Accordingly, if our culture be adequate to our need, we may look where nature has with full hand implanted any faculty, and expect to find there emphatic fruit of that faculty; just as the Jaguar's ferocity is a fruitful voucher of teeth and talons well bestowed; just as

a man who should habitually tear with his nails and hold on with his teeth would be so unmindful of his natural design and potentialities as to be rightly accounted mad: but no less mad (in a moral sense) than one who, with liberal endowment of intellectual faculty, should solely cultivate and exercise his emotions, or, with large natural gift of both faculties, should develop one to the exclusion of the other. So the microscopic and other evidence that a man's muscles are naturally stronger than a woman's is a warrant for our demanding especial fruit of that special endowment, for demanding cultivation of that element of strength in men more than in women, who are less adapted by nature for hard work. As, again, the general (though not universal) greater cerebral capacity of the human male demands generally (though not always) a more especial cultivation of male intellect. And as, lastly, the superior emotional capacity and susceptibility of a woman demand a more liberal culture of her higher emotional powers, and justify us, if her education be faithful to nature, to expect a free and fruitful exercise of these powers in advancing all æsthetic refinement. For if the man is paramount in intellect, on the plea of natural endowment; the woman, by the same plea, is paramount in the sphere of the emotions, and should, of right, chasten and exalt this sphere wherein she reigns, as her more scintillating fellow-labourer would, of his right, enlarge the sphere of thought. And this for the common gain of both. For neither should she, though not the captain of the intellectual realm, be unable to appreciate and participate in his conquests; nor he,

though subordinate in emotional activity, be insensible to her happy achievements in the æsthetic domain of taste and beauty. He would here be to her as reader is to poet, dowered with a capacity for appreciating and enjoying, and even judging, though not with the productive faculty.

This result would attend a wise and catholic education, one regardful of natural endowments, and studious of developing these in proportion to their relative magnitude, or subserviently to nature's design; an education or exercise of the faculties which nature everywhere sets forth in all creatures universally not human, the which inevitably exercise most fully the faculties they own in fullest strength.*

If then our present plan of female education be wise and wholesome, we have only to look to that sphere of life where the plan is carried out, in order to find our English woman in the full and free exercise of a cultivated and refined emotional or æsthetic influence. We shall find her with her inherent susceptibility to natural beauty developed to the point of artistic feeling and propriety, ordering and adapting the form and fashion of her dress prosopoleptically or regardfully of her personal requirements, and not in imitation of any queen or princess, any fashion in Berlin or in Paris. We shall find her in the drawing-room of her villa that looks on a blue lake, a brown

* This position (like all other positions touching a *general plan* of education) is general, and must admit of individual modification to meet individual peculiarities of temperament, etc., though not to the extent of neglecting or suppressing any individual gift, which should always be turned to advantage.

hanging wood, or a green upland, æsthetically regardful of the presence of these colours, and selecting by the authority of her own eyes and taste, fitting colours for hangings and embroidery, colours to complement those already on the retina, to relieve and refresh the seeing sense: by no means, of necessity, the colours most fashionable in Park Lane or at Osborne. And most of all in behoof of form, (that foodful purveyor to the soul of wholesome or discordant nourishment), how discreetly will all furniture, of use or of ornament, be chosen with reference to beauty, to harmony, to function, and the expression of function. There will be no searching interrogation if the Venetian vase she has fixed on is "quite in," if blue China is not "going out," if the mantelpiece must still be draped, or chairs be inexorably mediæval. All these points will be settled by a free and happy taste, a sense of beauty and relative propriety, settled absolutely, as of right, without appeal to the upholsterer, by one who possesses the fullest natural qualification developed to the fullest degree.

So much for her indoor influence, very imperfectly adumbrated. But for infinitely various manifestations of traits the most subtly æsthetic, most tenderly emotional, the garden full of nature's native voices is her fittest and worthiest exponent. The wretched, impious parterres of France, with their studied nauseous monotony blaspheming nature, which, viewed from boudoir or library, are just a green table-cover set out with coloured crockery;—with that most insensate atrocity committed on the gracefulest-growth ivy, which condemns it living to assume the form of a clothes-

basket!—these will never be found on her domain: surely be never sought for and procured by help of gardener and shears. She would as soon think of cutting short her hair to put on a red Russian wig.

Pity that it reads like irony this faithfulest attempt (in mere justice) to embody a few graceful offices, a very few frank household charities our women are waiting to perform! Offices which some here and there are performing in despite of our miserable conventions, but the prepotent influence of which authorized conventions, we must remember, will demand an almost masculine audacity to oppose them, and ever be too strong for the characteristic modesty of most women.

Now if the worth of education, like that of other things, is to be known by its fruits, how shall we rate the education which converts to our hurt what should help us?—Which, in face of a woman's heaven-bestowed special gifts of delicatest taste and modesty, takes care to macerate and starve the former to the passive renunciation of all æsthetic liberty, and to invoke the latter (which it cannot quite suppress) to shrink from resisting the monstrous despoliation, to forbear, for the sake of her native modesty, all claim to her native right of taste, to the exercise of her finer female function honourable to herself and profitable to him of whom she was meant to be the helpmeet! Shall we deem such a mocking education, which perverts and sets at enmity the human elements, a servant

* For an exponent of *one-sided* progress, compare, at Kew gardens, this and other indecently paraded barbarisms, in point of *taste*, with the admirable attainment in point of *science*.

of the Maker or of the destroyer? a seconder of creation or of chaos?

We look around for help and scarcely sight any, so efficiently is the poisonous regimen assimilated, so chronically morbid our condition, that health within reach is undesired, unrecognized, offers but a painful change. Yet sick we know we are, nevertheless: and just as sick men, touching head or chest, say, with sad knowledge, "It is here," all ignorant of what ails these regions, so we feel our education is "not right."

Something in the region of Female Education has troubled and alarmed us of late years. "The unnatural state of woman" has been noticed. "Rights of woman," "Emancipation of woman" have been called for, female voters, female senators proposed. And female blacksmiths and soldiers (both authorized by facts) will in due course be seriously advocated, (with a philosophic hankering for male mothers very reasonably?) But the natural potentialities of women have never once been canvassed any more than the natural potentialities of men. For we are too far removed from nature to have any glimpse or glimmering conception of what these are. The lower class of women (very sad!) are, in these days of cheaper education, the victims of brute strength, with just enough of natural emotion—of the raw material clumsily heroic—to cherish the hand that plagues them, and not enough of the cultivated material to attract, endear, and domesticate those facile, "massive-muscled" men whom mere gin-shop gas-lights can captivate. Whilst our unemotional money-scrapping men of middle class, made shrewd, less natural, and

more ignoble somewhat, are confirmed in this sordid mammon-service by wives in whom womanly emotions have been dwarfed, and sympathies with cash-box and counter cultivated. (Still very sad!) And our fortunate female upper class, with whom we have to deal now?—Opulent upper class, with masters at command, masters of languages, masters of sciences, masters of art (that cruel mockery which the Universities will have to make a reality of some day); class to whom much is given, of whom much is required; how is each privileged member of you discharging a woman's ruthful functions?

It may be with emotions somewhat dead in behoof of beauty, with some ascetic, yet withal pious, indifference to "those dangerous guides, the feelings," but not surely in a worldly and mercenary sense, either dead or indifferent hereunto?—not surely to the pass of abdicating your woman's crown of love, human charity, maternal pity?—to the blind pass of clothing in all pomp and rare accomplishment your daughters for a sacrifice at Mammon's sordid altar?

Try to disbelieve that, mainly, or even widely, in the highest social class, all the anxious solicitous watching of unfolding graces of person, of growing accomplishment in French, Italian, Music, Literature, all maternal careful scrutiny and pleased recognition of this promise is accompanied by a silent speculation of how much wealth or position these may currently be bartered for; and this without any care or consciousness of what help, cheer and solace they may bring to Truth's young soldier in sore need of them,—to Christ's young champion with love and heart and

energy and wit and a scholar's taste to apprehend them, and to make them honourable glad possessions to the owner; not a cruel reminder of their fruitlessness and waste.

A woman's perilous reminder of what might have been, and fraught with sore trial and temptation in which one may fall or one may stand. It is a dilemma. One may stray and be an outcast and a scandal; or hold firm to established conventions, strangle nature, succumb, and, approving the unnatural outrage, perpetuate it. Both baneful results, the latter politically the worst, since, manifesting no obvious evil, it cuts off all hope of amendment. It is the final test of a system of onesided education, which proves more pernicious the better it succeeds.

Yet despite this experience, and the prophetic insight of our wise and watchful poet having with repeated warning indicated our grievous error, originally in "Locksley Hall," again most mournfully in "Maud," and just now, with heaven's denunciations of wrath through the preacher's lips,* are we to go on manufacturing Mauds and Amys in order that an upper class whose emotions are systematically strangled or diverted from their destined work, may at least be reminded that emotions yet exist, and feel some remains of these stirring within them as they witness ever-recurring souls' tragedies with these persecuted emotions for their argument?

But have nations who have grown deaf to nature's voice ever listened to the *voces e deserto*?

* In "Aylmer's Field," where the Laureate's earnest convictions on this point are expressed by his speaking in the person of the preacher.

Yet with what characteristically fatal facility spurts up the answer to all this urgent argument through the pens of "irresponsible reviewers"! "Our author, who seems piously bent on remodelling society and abolishing its conventions (and by means of an agency, we must confess, somewhat novel, namely that of learning to draw), quite forgets that these conventions are in themselves wholesome safeguards. That they dissuade romantic young ladies of position from marrying heroic young men of the lower and middle classes, we readily admit without repining. Neither do we quite see at present how learning to draw would change this state of things, or justify the change, if made." An answer which will be sufficiently conclusive for all save a few serious readers who have discovered that these pages were not written to convert irresponsible reviewers; readers who have not gratuitously superadded absurd theoretic propositions for abrogating class distinctions, in order to convict the writer of absurdity; such as have read simply and entertained fairly what is written against the profane vanity of clothing in refined accomplishments of art and literature our daughters, who are confessedly too often sold to the highest bidder, be he never so callous to these accomplishments. Such a reader may possibly too discern that a sincere sympathy with nature and art (the means to which is studying nature's forms with eye and hand) would make it *improbable* that the possessor of such sympathy would tolerate a life-long companionship with moneyed insensibility. Perhaps he may look deeper, and observe, that the gross mesalliances which do occur are

the fruit of strong passions and bad taste, and that wisely cultivated emotions would not be captivated by Jeames's calves and swagger,—though they *might* fall in love with a poor scholar. And this only provided he be such a paragon as Lady Geraldine's lover, in which case no great harm would happen; for surely, once conceded that the male patrician have the stipulated advantage of some æsthetic culture, some capacity of sympathy with the taste and emotional refinement of a woman of his own rank, she would not be obliged, nor indeed likely, to seek this sympathy in lower spheres. Certainly, if there is one thing more than any other that would discourage unequal marriages, in point of rank, or class position, it is precisely that education which, cultivating emotions as well as intellect, would refine the taste, and exalt the scale of sensibility.

But is it not superfluous citing cases to exhibit the benefits arising from an *integral* education of our faculties; from the culture of the whole human creature instead of a fraction thereof? Is there any one but would ridicule the proposal to multiply the power of an engine by expanding the boiler, etc., and leaving the furnace unenlarged? Leave savage nature alone, and her operations will be harmoniously consistent; but develope in her, exclusively, one element and you make her a discordant organism, and, as such, less developed than before. A fish with human hands would be a deterioration. The whole graduated scale of animal life exemplifies commensurate development, and the whole graduated scale of social life demands commensurate development. The lower ranks, with

increased mental culture, demand an emotional culture commensurate with their increase of intellect: the upper ranks, with more refined intellects, demand more emotional refinement. The social grades will not be inconsistently confounded, but, on the contrary, consistently supported thus.

CHAPTER VIII.

MEANS OF FILLING "VOID IN MODERN EDUCATION," EMOTIONAL CULTURE IN BEHOOF OF BEAUTY.

AND now as to the means of obtaining a culture for the emotions commensurate and coördinate with our culture of intellect. Is the means I have indicated the right means? an agency so important as it indeed should be to assume the imposing position it here takes, as the one aim and object to be advocated in an essay avowedly addressed to the question of education generally, to the question of its elementary and primary requirements, and to its present primary deficiencies? For I distinctly aver (whatever conception an unusual mode of handling *may* have given to the reader) that it is this question I have *intended* to discuss, and not the question of art-education for its own sake merely or primarily.

For though—if an anonymous writer, at the close of his subject, may indulge in some honest egotism—I own to a cordial interest in art, I confess that it is only of late, while contemplating the perplexed difficulties of English education generally, that a discipline in graphic art (a training of taste, eye, and hand in behoof of beauty and expression) has appeared to me,

with more and more certainty, the missing educational element.

It was upon scrutinously and jealously examining those heads and sections of our curriculum that relate to intellectual culture, and finding herein no obvious shortcomings nor dishonest illusory pretensions; and, on the other hand, detecting in that section which relates to emotional culture a manifest, acknowledged mendacity, that I took up this thread of investigation, and followed it upwards to results now laid before the reader. The opening of such an induction would, I knew, inadequately exhibit the scope and character of its far off-end: but it seemed better to let that end naturally reveal itself to the reader (as it did to the writer) than, by a preface or otherwise, to inform him that something was in store which would only present itself intelligibly in the last chapter of the work.

Thus much for the possibly apparent, but by no means real, change of the design.*

Now to resume the question of "means."

Why, it may be asked, are not music and dancing (both pursuits characteristically emotional) selected, in preference to graphic art, as a means of developing and disciplining the said emotions?

The answer to which query, when it suggested itself in the course of this investigation, was elaborated under the following considerations.

The problem is less, here, to find out what is right than to find what is wrong in our education; less to

* The possible misconception here alluded to will be best dissipated by a due notice of the stress laid on the "Indirect Effects" of art-teaching.

find its abundances than its deficiencies. Now music and dancing are in our curriculum to good purpose; widely and well taught, for the most part.* They are genial nourishers of emotion, and the former, when accompanied by its science, is, on that side, correlated with intellect, and would be a means of coördinating emotion with intellect, if the science were the means to the art. But this is not the case. Nor do we find that musical people are, or are like to be, catholically emotional or alive to natural beauty generally, seeing that the province of their study is confined to the species audible, a comparatively limited sphere of sense and of intellect. For though it is granted that the great masters of music, who are poets to begin with, must possess this universal sympathy with nature, it by no means follows that what is teachable of their art confers this wide sympathy on the learner any more than we find the students and copyists of paintings (not nature) either appreciating or recognizing nature's beauty (which they tell you is inferior to art's). The master-musician (like all other poets) acquires his varicoloured world of ideas from an intimate converse with nature's various phases as they affect him, while the students of a master have ever been mere mannerists, drawing no fresh inspiration from the fundamental source, and less accessible to natural influences than the novice. Now it is emotional sympathy with nature we seek to cultivate:

* A comparative statement touching Music. But however there may be room for improvement here, accuracy of tune and time is, at least, insisted on; whilst, in Drawing, accuracy of form and proportion is set at nought.

and the widest observer of nature is the eye. Language, the counter of ideas, vindicates the truth of this; for where we have one symbol clearly defining sound, taste, or odour, we have a thousand symbols representing visibles. But when we reflect that a single sheet of paper figured with an accurate drawing from nature brings to the sense, in vivid truth, a multitude of objects which a whole written volume could not realize so faithfully, we can no longer doubt it is mainly through vision we establish the most immediate intercourse with nature.

Now objects presented through the eye do always, from their definite intelligibility, address the spectator's intellect, though not necessarily his emotions; while musical sounds, which do commonly address the emotions, cannot, from their want of definite intelligibility, address the faculty of intellect. If, therefore, we can but awaken the emotions into active sympathy with the world of vision, the means we are in search of is obtained. But we have seen that all things in nature are so pregnant with suggestive and stimulative influences operating on mind and emotion, calling on both thought and feeling,—that nothing but an earnest contemplation, a patient perusal, is required for nature to exert successfully this influence on both these faculties; only this visual perusal must indeed be earnest and impartial. The mere naturalist, geologist, or chemist, may come to the examination of nature with predetermined views, with a circumscribed desire for one object, with a special purpose and intention to look in one direction for one set of phenomena, and this his

earnest but partial perusal will yield him no more chance of entertaining nature as a whole (namely, as harmony or beauty) and developing his faculties as a whole, than one who looks for a coin upon the pavement has of noticing the colour of the clouds.

But how if we set the student to draw the natural objects, to try to reproduce their forms—What then? The answer is conditional. He may come to that task with a predetermination, with a partiality for pumps, stiles, and palings, with a resolution to find the creatures of the drawing-book in nature, and, seeing trees, to think scribble and make it; or, seeing nature's man and beast, to make the "Cattle and Figures" of J. D. Harding. On the other hand, let him come to his work with a mind single and earnest to entertain faithfully that whole image of nature which nature's light lays upon his eye, doing his uttermost to see and trace this seriously and sedulously with a critical exactness acquired at some cost of study; and so soon as he has attained to draw one natural outline, he has participated in nature's graceful work, his eye has followed her and his hand has sympathized, its muscles have moved guided by her law of grace and beauty, acquiring a new harmonious co-adjustment, the consciousness of which is pleasure, emotion opening upward, and emotion accompanied by reverence and gratitude.

But may we not, intent upon this, nature's emotional aspect, have failed to realize aught of that coördinated and commensurate development of intellect with emotion, which is, after all, what we are seeking? Hardly it may be answered, when we recollect that the means

was studiously critical and intelligent. The means, the process, was intellectual, merging gradually, as it neared its attainment, into its end emotion. An exact statement of the fact, involving assuredly the most intimate relation of intellect and emotion we can possibly conceive of: involving, moreover, what the question stipulated, a concurrent development of these faculties through the medium of the visual sense drinking at that incomparably fullest source of intellectual and emotional stimuli the world of visible phenomena.

Here then we have a solution of the problem that music cannot afford us. Dancing is exclusively emotional, and so incompetent.

It remains to discuss the claims of Greek and Latin versification. And strange enough it seems to give these claims the last place in the discussion when the unquestioned recognition of them, and that as the chief means of promoting æsthetic culture, seems all but universal just now. Surely our remote aberration from the natural sources of emotional (or æsthetic) development has left our æsthetics so emaciated that their verbal symbol has more substance,—that we verily take the word for the thing! Greek and Latin poetry is æsthetic because it is the outcome of feeling in the ancient poet, or the source of feeling in the modern reader,—because, for its cause or its effect, it is indebted to feeling and not to science. But when we scientially fabricate something in the likeness of this æsthetic product, *our* product is surely not æsthetic on that account, and surely the sciential producing of it cannot be an æsthetic process nor a means

of æsthetic culture. The boy who makes Iambics and Hexameters by the sweat of his brain is in a state of æsthetic syncope.

No. If this is the æsthetic exercise that is to keep the young soul from "running all to brain," from becoming a concrete intellection, it is well there exists a dancing-master to preserve him from the effects of our benevolence: he, at least, will save him from emotional atrophy, from psychical (and perhaps physical) heart-disease. But he may do more than this: he may make him a calisthenic enthusiast, a dervish, or debauchee in motion. Consider a boy of strong emotional nature, debarred all other outlet for emotion, discharging all emotion in this one channel, with no intellectual curb, no associated culture of intellect to restrain, chasten, and elevate emotion, and, by wedding it to intellect, to make this last attractive, and afford him a chance of developing both faculties. Then take note, thankfully, but with no self-gratulation, if this boy prove not a sensualist, or one with ungovernable muscles prone to lay hands on attractive objects not his own, a creature with an irresistible propensity, as we mysteriously phrase it, to veil our responsibility for such result. "A wiredrawn theory" this, of course, "to make education responsible for all unaccountable propensities, many originating in organic disease." And, certainly, if by "organic disease" (another handy form of expression) is meant congenital excess or deficiency, or poison parentally bequeathed, education is in such case exonerated. But when it is admitted that comparatively little of absolute organic derangement or mischief can with safety be

traced wholly to such causes, and how much actual organic disease can be traced partly to habit or permissive education, the so-called wiredrawn theory looks very like obvious deduction. A boy may stoop till his upper dorsal vertebræ become ankylosed; "fight dogs" till all that is most brutish in his disposition and visage, becomes hypertrophied; reject beauty, proportion, grace, till emotions answering to these become atrophied: and are not all these organic diseases? curable or incurable according to the degree of their inveteracy.

When a boy *first* gratifies the itch of his fingers and seizes on his play-fellow's property, there is a vice of function if not of organ; but when the indulgence has been repeated until the desire becomes dominant, the officiating neurine disproportionately excitable, and the muscular instrument hypertrophied, then there is a diseased organism induced demonstrably by vicious habit or mal-education, that is, by a partial, one-sided exercise of the organs, an inequitable distribution of culture, the which naturally results in a loss of equilibrium, a proclivous tendency (or "propensity") which the organism is now incapable of rectifying. For an absolute loss of equilibrium presupposes the extinction of a re-adjusting power.

If it is clear then that these so named propensities are not more "unaccountable" and "mysterious" than other sequences, let us come to the question, (that our herein discomfited opponents are sure to fall back upon,) "What would you do with a boy who owns these formidable emotions?"

First, refusing to admit that these strong emotions are necessarily formidable, I distinctly affirm them to be promising when well treated; that such a boy bids well to be a poet (of some sort), a patriot, or a philanthropist; that all such boys (with foreheads not abnormally narrow) condemn their education if they fail herein. In the next place, I would denounce the extreme opposite of that careless treatment already supposed, namely such rigorous treatment as would debar him all outlet for emotion by inexorably and exclusively prescribing mathematics, logic, and the more exact sciences. But I would proceed upon the principle so often here inculcated, that all the faculties or potential elements of humanity are good, and if one be very strong, so much the better. We have only to make that strong one a decoy for alluring its possessor to the strengthening of the others—by forbidding him any pursuit that exclusively employs the strong element, and by prescribing such study as will make some demand on that element and likewise conjointly exercise, only in a much greater degree, the elements you seek to develope.

So that if the boy is highly, I would rather say, strongly emotional in an animal sense, and passionately inclines towards dancing, forbid him dancing for the present, and his next choice is likely to be music, which, however, we have seen will not serve here: forbid music then, and drawing will come next, by which you will lure him to perspective, which province of drawing he will not so well succeed in, but which, if you make it the step to his promotion, his excitable temperament, discharging itself

next in emulation, will very soon enable him to master. He proudly exults in the achievement, has achieved something in geometry which, beginning to look somewhat hopeful, he will prosecute, no longer as that desperate drudgery it first appeared, but with hopeful interest and with augmented sciential capacity.

It betrays a gross ignorance of psychology to affirm that a thus treated pupil will for ever be reverting, at every opportunity, to gross emotional pursuits. His emotions have been unconsciously moving upwards, and will naturally discharge themselves in an upward direction, and find the field of their efflorescence in art, in poetry, or in some nobly sympathetic work. But, remember, if this boy, whose starting was so unpromising for science, should, by some accidental sequence of incentives, be drawn into scientific paths, though he will never be a laborious calculator, observer, or compiler, it is he, above all others, who is likely to take novel views of science, and to be an inventor and discoverer. True, this sort of temperament is rarely found in science, but "originals" in science are rare too.

Now, with the varied store of optional "extras" as they are called, at public schools, it would be no hard thing to find one of these to meet the requirements of any supposable case. As it is, the parents desire this or that one, mostly with a view to the boys' future aims. Parents feel this will be a priming, a sort of præ-apprenticeship. I will here quote from a letter of the Rev. Dr. Temple, one of the weightiest authorities on education, in reference to this view of the subject. "You may make apprenticeship a sub-

stitute (a very poor substitute) for school; but the inverse substitution will invariably fail, sooner or later." Should not final judgment on these points of extras be vested in the school—the desire of parents to be consulted so far as compatible with school judgment?

There is something so essentially delusive, so fundamentally hollow in the principle of mixed motive, that it should be ever excluded if possible. The motive for sending the boy to school avowedly arises in the conviction that school education is better for him than domestic education. Now if a parent attempted to stipulate that his son should use a certain Greek Grammar, or read certain authors, of course he would not be listened to. Why then should he be allowed to stipulate for this or that science or art? The school educators ought to know and to do what the boy's case requires; and this interference looks very like a doubt of their knowledge, and an abridgment of their power. If the ostensible motive is to have the boy educated according to the wisdom of the school's judgment, why presently add a second motive that may possibly conflict with the first?

But insisting no further on this principle, let us look to the import of Dr. Temple's observation.

It is evident that his view of the general function of education is not very far from the following. Education should be the (rationally) consistent, or harmonious development of all the fundamentally implanted human faculties. The object of education is the development of man: the making the educated as much a man as possible, and not as much a parson,

lawyer, doctor or soldier as possible; which latter object will be effected by a *special* schooling or apprenticeship. For it is obviously for the good of these vocations that the newly made apprentice be as well and widely qualified as may be, having at command all sources of information and of power whence to reinforce and multiply the resources of his special art or science, in other words, to advance these toward perfection, as well as to acquire what (imperfect) knowledge of them in his time exists. His case justifies the demand of Vitruvius, that an architect as a preliminary qualification should possess the principles of all other knowledge.

For though art be long and life short, and we are eager to embark the young adventurer with all speed, it should be remembered that as soon as he is so embarked he is in some degree isolated and cabined: his very concentration limits his sphere of thought, and, what is more, the manner of its action. To be duly qualified and equipped for his enterprise he should not only have abundant stores, but abundant power and facility for using these most variously. The great secret of *mental* education is not, as is too generally supposed, the storing of the mind, but the making of it.* It is the evolving of power or

* Our belief in "storing the mind" is absolute enough. We do verily think that a man of learning has got in his head so many volumes to be opened and read off at pleasure, and that what is put into the boy will come out of the man, just as a book comes down from the shelf the same as it was put up. Ben Jonson thought this conceit worthy of a Lanthorn Leatherhead howling forth his wares: "A fine hobby-horse, to make your son a tilter? a drum to make him a soldier? a fiddle to make him a reveller? What is't you lack?"

faculty: just as *catholic* culture is the evolving not of one faculty but of all faculties. Faculty of intellect, science; faculty of emotion, feeling; and rational faculty for adjudicating upon the evidence of both, wisdom. The wise man is beneficent and reverent because he reasons not alone from intellect and science, but likewise from the feeling of beauty and the emotion of love and faith. If both intellectual and emotional faculties are developed in him he cannot do otherwise—both witnesses plead, and he must hear them: they have been bred in him; they are bone of his bone. But let one be suppressed, and the most rational adjudication is most partial. Let intellect be suppressed (as we find it in some places) and the result is superstition and idolatry. Emotion cannot prosper without knowledge: she will have brute gods and human victims. But, without her, religion is extinct: and even science (in these days her assumed antagonist!) would presently become a moral pest, going to war for a theory, vivisectioning human subjects, or destroying deformed infants, as the emotion-suppressing Lacedemonians did, in fact.

Let us grant, then, that education, whatever its amount, should recognise and take charge of all faculties that are essentially human, developing them by exercise, coördinating them in exercise, and finding them fit and wholesome work. All hideously grotesque and wild varieties of crime utter, in horrible dumb motion, accusation against our neglect of human faculties. They are, in fact, perverted human faculties once tractable, now telling in savage act unmistakable what once they had heart and will to do. They say,

we would have gone to the South Pole and the North, have battled with hurricanes and icebergs; have helped your curious brains to more knowledge of your planet; we would have marched, sailed, delved, burrowed, and dived; but you found us no work, and we have found it.

So much for brute crime, the ugliest result of neglected faculties or one-sided culture. But look at the unbrotherly discord, and jar, and jealousy amongst the leaders of education, each disparaging the others' work from a sheer inability to apprehend it. "Classicists" and "naturalists" ignoring one another's claims to educational priority because, forsooth, each is barren on that side where the other is cultivated, and cultivated where the other is barren. Look at the classic's smile of commiseration for a brother educator advocating chemistry or mechanics—at the chemist's cold want of affinity for the cause of music in education, at the musician's deafness to the claims of drawing classes, at the drawing-master's impenetrability to music and all science.

Would we traverse the dictum "Omnes non omnia," and have each man a master of all subjects? By no means: we may say, with that dictum, it is impossible, but agree with Vitruvius in demanding a knowledge of the *principles* of all, and go on with him in affirming that an adequate mastery of one subject presupposes this elementary knowledge of all others. It is not so much the variety of facts and experiences thus attained, valuable as that result is, as the variety of thinking-power and feeling-power (which accrues to the student of many subjects through the necessarily

catholic development of faculty) that confers this transcendent mastery on the so qualified practitioner in his own special occupation. This advantage of many-sided development is too obvious to be disputed.

Only here we are apt to rest contented. Cultivate, say we, every human faculty, mental and emotional, none missed; find studies and occupations that evoke and exercise these, and your catholic education is accomplished.

Not so. Let us put to proof the efficacy of such a proposition. Take any familiar case at hand. Say to shoot with precision, wherein two main conditions are involved, and confine ourselves to these. The mark must be accurately sighted and the trigger instantaneously pulled. The faculties of vision and muscular function, in behoof of object, time, and steadiness, have to be cultivated perfectly. We have then, according to the proposition, only to train the eye to exactly sighting the object, and to exercise the muscles in holding steadily the rifle, and pulling the trigger at command.

But we see, when all these tasks are severally accomplished (along with the others, we omit) the end is very far from accomplished till the arm and the finger have learned to do their part the while the eye is tasked to its full power, and the mind is excitedly expecting the discharge. We have, indeed, cultivated each faculty, and secured in all perfection the individual performance of each corresponding function, but we have not coördinated these functions.

So the architect's knowledge of beauty and construction, if separately acquired, will not aid him in

combining beauty and structure in one design. These will ever be two alien categories of conception with him, and what he modifies to satisfy his sense of the beautiful he will presently find has damaged his construction.

The associated development of the faculties and coördination of their functions, is then the full statement of the theory of integral education.

Now although the practical and obvious relation and interdependence of all the sciences facilitate coördination of the intellectual faculties, a practical fusion, and consequently coördination of these with the emotional faculties is by no means so easy an achievement, more especially in civilizations of long standing.

In the beginnings of civilized society, indeed, when man is emerging out of barbarism, the emotional faculties are dominant, the poet addresses and sways these, turning them, in the form of tribal emulation, into channels of intellectual enterprise and social progress:

"Oppida moliri, leges incidere ligno,
Sic honor et nomen divinis vatibus atque
Carminibus venit."

But once these muniments and laws established, their originating forces have discharged themselves, and in place of the heroic enthusiasms and unanimous pulsings of the national heart, there spring up a multitude of individual motives and artificial wants, the objects of which are so obviously advantageous and captivating that they verily themselves become desires and emotions absorbing and engrossing human energy to the

exclusion, or partial paralysis, of the natural emotions ; as we find, in fact, at this period of an advanced civilization, that gold, bank-notes, and railway shares are often more immediate movers of passion and desire than the objects of poetry and philosophy, the love of virtue, or of the beauty of our native earth and sky. I will not say, that, absorbed in the means, we forget the end ; for the *former means* has now become the end, and bank-notes do give actual pleasure ; and parting with them for (the *former end*) books, pictures, statues, does give actual pain, for the sufficient reason that the old natural emotions are dead to the influence of these, or not sufficiently alive, or responsive, to bring as much pleasure to us as the mere contemplation of so much riches brings, in the form of a new emotion : for a new or artificial emotion, this certainly is. But why, since wealth is a source of power, and the contemplation of power is a natural emotion, should not the contemplation of wealth be said to excite natural emotion ? For the very reason, that wealth merely is, or may be, a *source* of power, and is not in itself power, as the career of the horse or the avalanche, or the strength of the tiger or the tempest actually is. The contemplation of these natural strengths excites in us unconsciously an exalted or sublime emotion participating in the might and majesty of any form of power nature wears : but the contemplation of the artificial power of riches awakens no high emotion, but rather a mean and selfish one, that of personal gain or advancement, a conscious conviction that we possess herein indeed a power to gratify any emotion or desire that may arise, but by no means an un-

conscious participation in any one form of power God's work reveals. Nay, I only consent to call this *mental* calculation of the potentiality of wealth an *emotion* after it has arrived at a certain point and excited the *feeling* of "muchness" or magnitude; just as the contemplation of high numbers or magnitudes in mathematics may result in such a feeling. For any intellection may be magnified into an emotion, of the non-natural sort, may, strictly, be a source of the sublime: and here was Burke's capital misconception of his subject (not in distinguishing the sublime from the beautiful, but) in making the *objective* sources of the sublime and the beautiful fundamentally distinct and antagonistic, since beauty or hideousness equally are capable of being magnified or exalted to an excess which is sublimity in behoof of the spectator.—But this by the way.

As we have seen, then, that the primary and natural or elementary emotions of humanity (those we seek now to develope and coördinate with intellect) are likely to be extinguished or seriously impoverished in a long-established civilization; so we cannot fail to see how all forms and phases of intellect are constantly at work to promote the aims and objects, and to supply the artificial but necessary wants of an artificially* upheld social state. So that whilst all the coöperant forces of intellect are more or less spontaneously coördinated *inter se*, to coördinate these with the rarely active or well-nigh expunged natural emotions is a hard, abstruse problem.

* "Artificially." This expression is not used disparagingly, or anti-thetically to a society non-artificial, since all civilized society must be in a high degree artificial.

The one hopeful solution that offers itself is *a sufficiently attractive educational agent capable of evoking into simultaneous exercise both intellect and emotions*. But as these latter have parted with much of their nature-sympathy, run vaguely into artificial channels; that agent would prove most efficient which should restore and reconcile them to their primary allegiance to nature by concentrating them upon natural objects.

Now the studious contemplation of nature accompanied by exercise of eye and hand in faithfully delineating her structures, not only with a view to their functions, but also with a view to their beauty of form and rhythmic motion, seems precisely to fulfil the stipulated conditions. And even if such a study had no *immediate* issue, compassed no directly useful ends, would it not, as a common stimulator of both faculties, possess unique claims to consideration?—would it not indeed prove the key to the key-chest?—the master key that some have professed to find in the study of classic literature, others in that of natural science?—each of which keys does unquestionably unlock a precious casket, each discovering its egg of genuine gold, but not the despised grey parent whose prolific ovarium the faëry fable points to as the source of many golden products, as many times more precious than any of them.

Nor is there in this fable any mystery or marvel more amazing than the mystery we make about the most unaccountable attainments of two men I am about to call as witnesses to the value of a now underrated educational agent.

Whether the accomplished Greek scholar is neces-

sarily imbued with, and does participate in, the spirit of Greek thought and feeling, as the so-called classicists contend, is not clearly certified by experience, or, as we now say, by "results": but that John Keats was indeed so inspired in heart and head, is the standing wonder of all scholars who remember his ignorance of Greek. How did he attain to such an unquestioned authentic possession of Greek soul that Greek scholars are fain to supplement their deficiencies in this form of Greek by recourse to his Greek-inspired Anglo-Saxon?—by coming to one, who never read a line of *Æschylus* or *Homer*, for a draught of a more effectual *Hippocrene*? Let us see if we may explain this mystery of mysteries.

Well, first, he studied Greek (in company with his friend Haydon the painter), by reading neither *Homer* nor the dramatists, but by perusing very earnestly the lines of *Phidias*; not lines of conventional symbols, to be interpreted by help of the lexicon, but lines of natural significance, to be interpreted by the eyes and feelings of all men of all tongues and nations and ages:—by perusing the still living and not dead language that *Phidias*, with hand and soul, wrote visibly on the marble of the *Parthenon*, showing us unambiguously what nature was to him; what, in short, the Greek world was to the Greek soul. First, this; but, secondly, (and most of all) what follows. Keats never strove to put himself in the attitude Hellenic. He wrote no hexameters, and carved no *Panathenæik* friezes: he imitated no Greek product, but did as the Greek did. He studied nature with a view to her beauty and her meaning: he discerned

the essential elementary forms of beauty, or grace, or strength, both of action and endurance, not only in man and woman, but also in her lower forms of vegetable and animal; in "the goat's swift leap, startling the wild bee from the foxglove bell," and in "the heifer lowing at the skies, with all her silken flanks in garlands drest." So, in this manner, he came nearer to the Greek soul than Porson did. He had not the key to Porson's dark passages, but he had the key to the immediate presence that spared him the thridding of dark passages. Surely we have good reasons for learning Greek, without fallaciously ascribing to it uses which, as in this case, it does not own. But anyone sincerely assigning this reason, really desirous that we should so assimilate ourselves with the refinements of Greek thought and feeling, anyone recognizing the veritable benefit of being herein *like* the Greeks, will, considerately observing that the Greeks did not devote the best part of their school-days to the acquiring of two dead languages, readily convince himself that this is not the way to mould us into a Greek similitude;—and least of all when this very un-Greek schooling omits the essentially Greek study of the beautiful in art and nature.

But feigning or sincere, and advocating his ostensible object, æsthetic culture and refinement, with argument logical or unlogical, he who acknowledges only the need of such culture, and discovers in it a source of upward amplification of faculty, of multiplication of power intuitional and rational, is more or less a labourer in the field of natural human development, is an appreciator and vindicator of a

potential beneficence inhering in every native human element, and a believer in the developable capacity of each. I should say that such an one, as not against us, must be with us. He, at least, has sighted the true means to all ends, and has not mistaken a single end for the means. And so likewise of the advocate of natural science as a means for developing the faculties; his purpose is unanimous with ours, but whether he has elected the most efficient instrument; whether the best means for investing man with his fullest legitimate dominion is found in any teaching of the sciences, so far as a boy may learn them; whether even a merely *scientific* capability of intellect is best obtained by such a solely intellectual and non-emotional activity, we must call our other witness to show.

In speaking of Leonardo da Vinci, whose education was both intellectual and emotional, but hardly scientific, Hallam says: "The discoveries which made Galileo, and Kepler, and Mæstlin, and Maurolycus, and Castelli, and other names illustrious, the System of Copernicus, the very theories of recent geologists, are anticipated by Da Vinci, within the compass of a few pages, not perhaps in the most precise language or on the most conclusive *reasoning*, but so as to strike us with something like the awe of præternatural knowledge. In an age of so much dogmatism, he first laid down the grand principle of Bacon, that experiments and observation must be the guides to just theory in the investigation of nature." (The italics are our own to emphasize the non-rational and therefore emotional source of insight.)—And, further

on: "He explained the obscure light of the un-illuminated part of the moon by the reflection of the earth, as Mæstlin did long after. He understood the camera obscura, and describes its effect. He perceived that respirable air must support flame: Lorsque l'air n'est pas dans un état propre à recevoir la flamme, il n'y peut vivre ni flamme ni aucun animal terrestre ou aérien. Aucun animal ne peut vivre dans un endroit où la flamme ne vit pas. Vinci's observations on the conduct of the understanding are also very much beyond his time. * * * Vinci understood fortification well, and wrote upon it. * * * He was employed in several great works of engineering. So wonderful was the variety of power in this miracle of nature." Hallam might have added that Da Vinci explained the blue colour of the sky by a most ingenious synthesis, and demonstrated the nature of binocular vision, and the impossibility of painting objects under their binocular appearance; a fact with which Mr. Alfred Smee, in our own time, does not seem to be acquainted!

I have not mentioned Da Vinci's lucid and original ideas on perspective, and more especially on the perspective of miniature drawings, wherein we have something yet to learn from him and to practise; his admirable account of the muscular mechanism employed in pulling, in pushing, and in leaping, and his treatise on falling bodies, wherein he enunciates the law of cumulative velocity: but enough has been cited to establish the probability that, with command of our scientific facts, he would have exceeded our utmost reach of science, that is, supposing him to have

secured previously that intro-active self-multiplying mind-power and breadth of view which resulted from a catholic development of faculty: but whether, without such development, and with the aid of scientific cramming, he would have been this "miracle of nature" is a question not hard to answer.

We know that the language used in commenting on Keats' almost native familiarity with the essence of Greek thought and feeling is characterized by the epithets "wonderful", "unaccountable", &c.; and we have seen the grave Hallam (not prone to indulge in hyperbole) using the expressions "præternatural knowledge," "wonderful variety of power," and "miracle of nature," &c., whilst amazedly contemplating Da Vinci's gigantic grasp of science. In the case of Keats, the wonder has been eliminated by adverting simply to the fact of his not only studying natural beauty, as the Greeks did, but studying likewise Greek authors who speak less ambiguously than those we read at school, namely, Phidias and Praxiteles. And if it had been the custom to study the works of these Greek authors and the works of the Author of beauty (as I have recommended), there had been no wonder at the result. Let us ponder now, and fairly estimate the significance of our wonder at Da Vinci's "præternatural knowledge," his "revelation of physical truths," and notice here, as in the case of Keats, how our wonder is simply the sequence of *a priori* conviction, on our part, that all natural truths are approached by a certain method, which method happens to be ours.

And first notice Hallam's astute remark, that

Da Vinci's anticipations of modern science are not demonstrated by "conclusive reasoning." They are rather emotional intuitions, "grasps of guess," such as I have before indicated as anticipating the subsequently "reasoned out" discoveries of one mind. For the history of science in the individual mind is the history of science in the aggregate. What were the means and the data at Da Vinci's disposal? Let us try to get back into the age that preceded him, to realize the fresh natural vigor of unrepressed emotion abundantly flooding and permeating the preliminary "efflorescence out of barbarism," and * "witness a Greek or two, from the abysm, that stray through Florence town with studious air," the surging up of intellect from this abysm of antiquity, and the manifest probability of the culture that was to follow being emotional as well as intellectual. Here are the conditions for evoking a great mind-power, an active, many-sided, many-sighted view of things, precisely the alert, spontaneously intro-active condition of an equally developed mind on the verge of a discovery. It is the condition of those parturient periods of national history which amaze the historian, and persuade him that genius moves, like comets, in eccentric orbits, and visits the world at destined intervals. It is a condition which must, however, somewhere happen in the progress of all nations from barbarism to social refinement, that condition, namely, that arises in the confluence and temporary conjunction of the two great human elements, intellect and emotion. Temporary for this reason, that self-con-

* Sordello.

sciousness must ever follow the putting forth of special energy, whence the balance of dominion turns immediately in favour of intellect, which accordingly aspires to legislate, systematize, codify, and artificially encumber or prostrate the emotions while establishing a sciential supremacy. This happens gradually however, for it is only gradually that emotion relinquishes its hold on each pursuit as it grows more artificial and overlaid with dogmata and formulæ. It takes, at first, the refined form of verse, and indwells there till verse is perfected. Once perfected, and felt to be perfect, this first-matured form of poetry is surrounded by laws for the better maintaining it in that perfection; and from that time is no more emotional and original. Sculpture, painting, music, and, in turn, all arts and sciences, become, in more or less degree, temporary refuges of emotion, all of which it informs with the life of original aspiration, and pushes to a point of attainment which intellect deems absolute and worthy of being by law established, a precaution which succeeds in annexing such art or science to the domain of intellect, and severing it from that of emotion. The living soul of art and science is thus, presently, extinguished, for though the evoked facts continue to exist, nay, go on multiplying amongst themselves, fact engendering upon fact, our mastery of these has elapsed: we have arrived at that humiliating pass when the tools are in advance of the workman, when the things are advancing, not the man; when hand usurps the place of soul. Since though we concede that another generation *may* attain to wield facts we have thus experimentally and dark-

lingly evolved; in the first place, the injury, the degradation sustained by this age, through such suppression of the ideating faculty, remains an unredressed grievance; and, in the second place, we are presupposing, on the part of the next age, an activity of ideating faculty, wherewith to comprehend and co-adjust these facts, which we have no reasonable warrant to expect, seeing that what we ought reasonably to expect is a decrease of ideating power, and an increasing appetite for experimental industries intent on the accumulation of more and more facts to our ultimate confusion and dismay.

No wonder, in this partially paralytic state of potential human energy, that we marvel at the "divinely gifted insight," the "super-human knowledge" of men with a freer use of faculty. For it was not one man but many that irradiated the "intellectual darkness" of the times we have been looking to. First, bards, thickening into a constellation about Dante: then painters, sculptors, architects and philosophers, these mostly combined in one person (as in Alberti, Da Vinci, and Angelo); and, lastly, the man of science only (Galileo), succeeded by centuries of minute plodding, industries, that disintegrated, inorganic non-luminous star-dust of man's universe, where cohesion and cöordinative power have succumbed to the force of surrounding attractions, and where human thought, astray and at the mercy of these, kindles and consumes in meteoric flashes. For such, after all, are the brilliant discoveries of the age, if we (the imputed discoverers) are less widely capable to see and feel the wisdom and deep beauty of things

with their interdependency sciential and emotional. If we, having more physical means and appliances, have less psychical potency; if, confounding the means with the end, we estimate steam locomotion and electric telegraphy as velocity, and velocity as a *necessarily* profitable consummation, whilst we curtail our privilege of thought, observation and enjoyment, by allotting to rapid travel, incompatible with profitable entertainment of time, a disproportionate amount of that time we think "to save":—if our hands are so much in advance of our heads that they build us ships we cannot launch; if uncounselled hands are making warlike engines that leave us more exposed to the enemy; if, in fine, we are coming to possess, or be possessed by, a material agency or force, a "*vis consilii expers*" which "*mole ruit sua*,"—then these material agencies, advancing in advance of us, developing themselves every day under the hands of the astonished experimenter, not discovered by us, but *discovering one another*, leading us, driving us, shrieking at us; these, iron, coal, fire, steam and electricity, seem rather to indicate that matter is lording it over mind.

No wonder, I repeat, in this state of "material prosperity," when all seems hanging on the might of chemistry and mechanics; when the thought of parting with these seems like a vision of destitution and despair, that we wonder at the intellectual and moral wealth of men who lived and wrought without such aids.

But, it will be argued, if, according to this theory, after the happy conjunction of intellect and emotion,

a nation becomes fettered and involved in artificial and material pursuits, and this in virtue of a law emerging out of another law, that of self-consciousness following all noble attainment and superinducing the supremacy of intellect; what remedy but that this must continue? that nations must ever run this course until these laws of mind are abrogated?

I answer, that though the growth and decay of the faculties of an individual may be fitly compared to the development and decadence of those of a nation, this is only true when a nation's faculties do decay: but is there any necessity that they should? A nation does not actually die like the individuals that compose it: and it is this very death of the abnormally developed individual which ought to make it possible for a nation to retain its vitality, seeing that each new birth starts afresh with all those embryonic faculties the equable development of which produced the so-called "marvellous results," which may surely be produced again by the like means? And the means are at hand, if we could see them: means we have missed, and shall continue to miss, while, exclusively attentive to intellectual development, we assist the operation of that very law of mind just referred to; assist while we ought to strive to neutralize it.

It has been acutely and veraciously observed that special ages and races have had in charge the development of special human faculties and functions: the Hebrew, religion; the Greek, beauty; the Roman, law; the moderns (in one word), exact science and mechanics: but we should be sorry to think, on this account, that all these, save the last, are dead and

done with: that the world, grown old and hard, must never hope again to see her youthful glad spring-time of poetry and beauty, set for ever with the last rays of Greece. We would rather think that these successive evolutions of involved but never absent human faculty, are earnest of a full-summed harmonious development yet to be: that however true the profound psychological position, that our mere consciousness of that old poetic age must ever negative its recurrence in pure untravelled freshness, still the boy's sense of yesterday's enjoyment does not blunt his appetite for tomorrow's; and why? Because his springs of enjoyment are not frozen or dried up. And the old world, whose sunrises and seasons are still young, whose young souls are born with keen emotions, may grow wiser but not therefore the less joyous. With the story of Greece's exultant life of beauty in our ears; with a knowledge that nature was visibly and audibly a divine and rapturous presence, and a felt inability on our parts to realize this rapture, we conceive that it was something peculiar to that age. But re-impose similar educational conditions, and we must have similar results. If Greece bore abundant fruit of the emotions, it was because she cultivated the emotions so abundantly: if she dispenses law of grace and beauty to the ages, it is because she entertained grace and beauty as fundamental truths of man's universe worthy to be contemplated and explored with all diligence: and if we accept her laws and ordinances hereon, professedly studying her written page with the avowed purpose of gaining some measure of that æsthetic refinement she attained to, why is it

that we presently halt and stand at gaze here, and do not, in a nobler spirit of imitation than that of word mimicry, testify our sincerity of purpose by adopting the course she took, by believing with her that the beauty of created things is indeed a truth in man's universe, that this truth abides in the field of the emotions, and will fructify only when this field is cultivated? Why do we not suspend captious judgment about the means, as we do about the end, and try the very means the Greeks employed, put in force the Sicyonic Law, and embody in our curriculum permanently and efficaciously, and not optionally and illusorily, the study and imitation of form?

If to no one else, at least to those who believe in the supremacy of Greek taste, and the æsthetic uses of the study of Greek literature, this argument should appeal irresistibly.

Still the claims of æsthetic culture are only rightly based on the value of æsthetic culture intrinsically, for its own sake, and not on any adventitious lustre or prestige conferred upon it by Greek art or Greek custom.

But before the final and summary consideration of these claims, let us (as our limits are gradually contracting) dispose of this question of "means."

We have seen at every step and turn of this investigation that the feeble folly called "drawing-master's drawing," with its substitution of easily acquired conventions for the truth of nature, and its dishonest pretensions to the combined teaching of form and colour, is not only utterly incompetent to the attainment of any one useful end proposed, but

most of all, ludicrously inadequate as a means for securing that coördinate development of emotion and intellect which we have found to be the indispensable condition of full and impartial education.

But since colour more than form addresses and stimulates the emotions, why may not an honest and accurate study thereof furnish the means of emotional development? It would unquestionably furnish such a means, but not the means required, namely one for coördinating this faculty with the intellect. If indeed the study of natural colour could be prosecuted critically, the result might be successful to some extent; though, seeing that natural colour is subordinate to natural form, it would scarcely be profitable to entertain the claims of colour while we have all too little time for satisfying those of form. Only bear in mind that the colouring taught in schools is not critical, nor honestly imitative of anything in nature; that it is a mere sensational pastime, a laying-on of pigment by recipe, without intelligent observance of the ever relatively varying aspect of natural colour under varying conditions; a childish game at "make believe"; one wash for "distance", another for "middle distance", and a third for "foreground": a most perfectly devised means, in short, for vulgarizing the emotions and emasculating the intellect.

If it were not that natural form opens such a much wider field of exercise both to intellect and emotion than colour does, and if it were not already impossible to command time for an adequate exercise in this field, a critical study of nature's colour, and of what constitutes both melody and harmony in chromatic

arrangement, would be extremely wholesome discipline, not only for the eye but likewise for both mind and feeling. For this would be a branch of natural science indissolubly correlated with æsthetics in a theoretic or speculative point of view, though by no means in a practical one; since the intellectual cognizance of the chromatic laws, and the sensory fruition of their effects, however obviously correlated, would rather be a subsequent experience, something to follow the handiwork, than that synchronous exercise of mind and emotion which accompanies the pleasurable exertion of hand, eye, and intellect in delineating a beautiful and function-expressive form. Still we might do well to encourage the study of those branches of natural and exact science which are associated with our senses, and explain them in some degree, since nothing is perhaps better adapted than these studies to modify that absolute and materialistic tendency of thought which an early familiarity with the seemingly self-sufficient forces of chemistry and electricity is apt to lead to. I doubt if it is fair and faithful to teach a pupil the doctrines of light and sound without at the same time making him aware of our remote distance from, and ignorance of, these beings as existences distinct from ourselves; without warning him that there is, for us, no *absolute* knowledge of these, saving that which he already possesses in the form of sensation, the *substratum* of which is conjectural.

I should on the whole, then, be disposed to admit into the curriculum, if there were time for it, the practical study of harmoniously combining colours, to supersede the dishonest pretence of depicting the colour

of natural forms which the pupil knows not to delineate, the colour of which depends upon the form; and to save him from that debauching of the eye which attends the assumption that a few conventional colour-mixtures are the likeness of nature's colour.

Thus colour, instead of a source of fallacy, might be an ally of truth. And perhaps this is the precise point for calling attention to one of the many misapplications of our resources, which, arising in the nescience or forgetfulness of what is the very function of education, may be taken as characteristically representative of our modern hiatus.

One of the new births of modern science, and one which promised good and cheap (and *nice*) information in point of art, photography, we have actually allowed to be made the means of debauching public taste by suffering mammon to take undisputed possession of this (as of other new inventions), and, by pandering to a vulgar appetite for false colour, to present a populace sorely lacking the aid of truthful transcripts of nature, with a version of her both untruthful and vitiated. Photography, as a colourless representation of nature, is good and mainly true, but, like other good things, say the printing-press, is only conditionally so, and may be made procuress to evil and untruth by simply leaving it in the hands of mammon quite certain to pervert it to base ends.

Here, at last, we have, in an age that wants art-teaching, the very utterance, clear and truthful, of the sun himself, telling us distinctly how nature looks in black and white. Such a gift would have been valued and held inviolable by the Greeks, and a law would

have assuredly averted the desecration of it, by interdicting the sale of coloured photographs. But no. We (in our noble confidence in "non-interference," non-government, and anarchic policy) leave *things* (we confide in *things*) to take their course, allowing all *spirits* good and bad to make the best or the worst of them they can. So mammon (business enterprise), an alert spirit, grateful to a liberal policy that has knocked off his fetters, says, "Let us see what can be done, my dear subjects, so confident in your world of things good and new, and the good so necessarily inhering in them, that you leave us all free to manipulate. Let us see if we cannot convert this new thing, with the truth of God's sunlight inhering in it, to our joint advantage. Pictures of your family and friends, in your cottages! nice things to have, like the rich (and why not?), in gilt frames! not colourless and cold, but real miniature pictures complete, equal to Ross or Thorburn (price fifty guineas), for a shilling!"

And immediately, and somehow in spite of our wise policy, mammon has a photographic monopoly, has the "solar artist" under contribution to teach artistic untruth for truth, and has moreover knocked in further and tightened here and there some of those little rivets of his rule which he inspects daily and hourly with all care for the good of his subjects, *he* not believing in anarchic policy in his kingdom. If we had not drifted into a practical materialism, or belief in the (spiritual) qualities good and bad inhering absolutely in things; if we could once again be brought to be conscious of the never-ceasing conflict between spirits

good and evil; if "Church militant" were something more than a word with us, we should hardly throw open our munition of war for the use of Christ's soldiers and the captains of Tophet indifferently.

But believing, as we do, that *things* are absolutely and unalterably good or bad *per se*, we are consistent in trusting, as we do, that no evil spirit (if there be such) can possibly evoke a bad result from a thing like photography or the printing-press, which is irreversibly good in itself. And so it follows, having once found out what things are good, that we have a "policy" based upon the thing we most believe in, and named from it (as commercial, non-interfering, etc.) to secure our "material prosperity," and not a government to preserve us from the enticements of bad passions, or spirits* (as from that of gambling, by the suppressing of lotteries).

If (not, as now, led by the craving appetites of the majority, and by the press, representing it) we were ruled by a government, and not by a policy, we might indeed, as that government were wise or unwise, spiritually prosper more or less, and have a fair chance, in the end, of finding godly rulers: but ruled by a policy founded on the belief in the last eidolon that has fascinated the popular mind,

* "Bad passions, or spirits." Gambling, like murder, is a spirit not a thing. The things chance-play and killing are neither, in themselves, good nor bad: things never are so, since they may represent good or bad thoughts conditionally, as killing may be murder or patriotic duty. Only let us remember that the expression "bad passions," here used in compliance with common parlance, is inexact when applied to any primitive or fundamental emotion which is ever a potentiality for good or for evil, according to its development, or (in other form of speech) education.

we can only perpetuate the rule of such fleeting ebullient desires as float uppermost on the surface of society: we can have no hope of any profitable reform, which is ever led in by a few advanced spirits who could never be heard while antagonizing the clamor of popular policy: whilst a government, if wise, may entertain the innovations of the few, and afford us some chance of reform. All theories of advance (even Darwin's) suppose an extrinsic stimulus or constraint. The family of fungi or of pigs would never change for the better under their own rule: the former would ever call for rottenness, and the latter would ever vote for hog-wash and garbage, with no chance of rising to half-reasoning elephants and more cleanly appetites. It is a mathematical statement, *that the average wisdom, which is below the maximum, must ever be returned by the average suffrage.* It is thus with education: if the average education is at fault, as we admit, the guidance to a better education will never come out of the average-educated, but only out of the maximum or best educated. The former call for *things* which seem to profit them, of which (being ill educated) they are bad judges: the latter seek for *powers* and cultivated faculties to evoke better results, of which they catch the distant prospect. Now our popular "policies" are (as we have seen) based upon the belief that some *things* are intrinsically and absolutely good (it is the child's conviction about sweetmeats which he would have in bushels); and hence (we being ruled by a policy and not a government) come the mis-application and bad effects of things lately discovered which truly possess good

potentiality if directed under wise governance, as just instanced in the case of photography.

But take the printing-press, potentially the most able instrument of improvement of modern times. We conceive of it as a thing absolutely good, and leave it to work out its destiny. Pledged to a policy of "non-interference" we can hardly do otherwise. We may hold public executions, and popular familiarity with horror and crime demoralizing, but we are bound to let writers of fiction pour all the horror and crime that the popular appetite demands, and that make the trade of fiction profitable, into the already too morbid public mind. For are these myriads of writers writing for truth or for money? And do we think that books written for money will teach truth? With such teaching abroad we may well begin to feel the need of legislative interference with education (swallowing our "Let alone" policy, for once): but whilst the emotions are untrained, the appetites prurient, and the taste gross and barbarous, shall we not, with a press ready—nay, compelled by a professional necessity we have instituted—to supply the aforesaid savory literature; and whilst the incentives to wholesome writing are by our "Let alone" policy diminished, and the supply of truth comparatively scarce; shall we not—I speak of the average—go on feeding upon garbage? Will not the craving emotions that we cannot kill, and will not educate, go on demanding more and more fiction written purposely for their consumption?—and written with such mercantile success that it will soon require a very great deal of disinterested enterprise to write any other sort of

book. But what has this peculiar (and certainly not elevating) result of the facilities of literary authorship to do with the claims of æsthetic or emotional education? And why repine at one of the inevitable consequences of a free press, unless we would curtail its freedom? A literary censorship will hardly be proposed as a remedy for this evil, which we must trust time will cure. New tastes may set in, like new fashions, and the populace, once feasted to repletion and nauseated with the obscene repast of fiction, a chastened and more wholesome appetite will presently succeed.

I would answer that, since surfeiting the appetite of one generation will not nauseate the next, any hope of time bringing the remedy is unfounded; seeing some generations have passed without revealing any signs of this reaction; but, on the contrary, that the demand for fiction is steadily increasing, and that the latest novels are most morbid.

Answering the questions in the inverse order of their putting, I would go on to admit the futility of inveighing against what is "inevitable"; but contend that the result in question is not inevitable, but the reverse, and, so, justifiably condemned. Again, I will admit that curtailment of the liberty of the press is not the remedy: and, lastly, in answer to the first question, What has this popular morbid appetite for sensational fiction to do with the culture of our emotions? I would reply, very much, and, perhaps, all.

I have said that the claims of æsthetic or emotional culture are only rightly based on the intrinsic merits

of such culture, and now say, as confidently, that the pretext hitherto put forward, classic example, is not only unworthy of Christians (if this culture is not profitable to Christianity), but is no slight cause of æsthetic study being the dishonest and fallacious thing it is, namely, a counterfeit filling-up of an educational hiatus, a false pretence falsely motivated, and the parent of innumerable falsehoods.

We have seen how the want of real emotional culture, in the form of graphic art, with its substitute drawing-master's drawing, teaches falsehood to the young; how the want of such culture, in the form of taste, sense of harmony and of beauty, is written in disgraceful characters upon our public buildings, monuments, and private dwellings, upon our furniture, upon our persons, upon our gardens, upon the confused faces of our aristocracy, when art is in debate, upon the gross recreations of our lower class, and the practice of the artificer unsympathetic with his work: how the want of emotional sensibility, in the form of impenetrability to nature's beauty, dishonours the design of nature's author, whose works are unerringly beautiful. And, lastly, we have seen how the uncultivated emotions, undisciplined to take delight in truth, run riot and feed on monstrous fiction; how morbid our desire for the unnatural, the supernatural, and pseudo-miraculous; how science, seeing nature from one side, the intellectual, finds her a circle of self-sufficing causes, inexorable, apart from human love; or, presently succumbing to emotions she disowned, turns credulous, making gases into gods: how literature purveys to the appetites of insatiate

emotions keen upon bloodshed and the savor of crime, till judges and gibbets see the upshot.

Do we ask what these results have to do with the emotions? Will cultivated emotions, chastened, coördinated and reconciled with reason, evince these appetites or admit of these results?

Finally, are the emotions fundamentally evil? unworthy and incapable of culture? Are they unholy and unchristian? Were they in Gethsemane?

POSTSCRIPT.

THE critique in the Addendum to this volume, "How we write on Art," was written six years back, immediately after reading the article it refers to; and as it expressed my convictions at that time, and mainly expresses them now, I thought it better to preserve it in its original form, and simply append it, in further evidence of there being such a void in Education as I impute, than to make those modifications and omissions that would have been indispensable to a closer incorporation with the text. But now, on examining it before printing, I find it such a real record of the facts these pages have been trying to lay open, and feel it is this so much more than the reader can understand it to be, that the few words of general Postscript I had designed might be quite as rightfully connected with this critique as with any or all of the foregoing chapters.

For I was going to say something more, in evidence of what I have called the hiatus in education, as well as something more about the means of getting rid of it.

First, in respect to further evidence of the imputed hiatus in education. The annexed sample of how we write on art is an unerring exponent of what a settled conceit of irresponsibility inspires our Fine-art writers,

and of what a secure confidence they feel in the vacancy of every judgment-seat before which they might be summoned by the press or by public opinion. Of all this it is a most clear exponent: but of what is the actual tone of public feeling, or rather, state of public ignorance on these matters, perhaps a safer exponent is the feeling of publishers as to what sort of art-writing is marketable now-a-days: and of this, the private history of our small critique will be much better evidence than aught that it contains.

Having written it (and, I believe, rather to distinctly realize the fallacies of the *Saturday Review* article, than with any ulterior object), I said to a friend who was present, "If we desired to give this circulation in any periodical we should desire it in vain, since no editor, publisher, or proprietor would have it: and proprietor, editor, and publisher are all much the same on this point." My friend seemed sceptical, however, and the manuscript was sent about to try its fortune, tested the security of our postal service for some months, and, at last, becoming *passé*, was put by.

Now editors and publishers are just as patriotic as other men (sometimes more so), but editors and publishers have (like other men) their own immediate trusts and duties: and to set up a censorship over jaunty Fine Art philosophies, and abolish them at a blow, would, in the present state of the market, be a betrayal of trust and dereliction of duty. If we expect publishers to rush into bankruptcy for the discouragement of idleness, inanity, and untruth, we

may also reasonably expect them to ask why they in particular should do this.

Seriously, I do not think it is the press that can replenish what has become a void in modern culture. But a few words more about the fact of the void's existence before a further and final discussion of the remedy.

If the facts just stated bear witness to the popular conviction that art is a thing of no real interest or import, and that it is fair game for each literary (and other) sportsman who sends up his contribution to the magazines in the silly season; what shall we say of the recent and fashionable doctrine, that the Greeks, whom no one (as yet) accuses of indifference to beauty, neither loved nor appreciated nature. This is subject-matter for not only magazines but newspapers, and it would seem that we no more dare to doubt or dispute such doctrine than we dare to doubt that of free trade and fast travel. No sooner does the gossiping correspondent commence his despatch, on the morning of the "Derby", say, and begin to revel in the picturesque, than he is pretty sure to tell us, as a pendant to some classic extract, that the Greeks, "however passionately addicted to racing and field-sports, were wholly insensible to the pictorial influences of nature." And this is not said as anything original or new: he knows quite well that all his readers are apprised of it; it comes merely as a wholesome and judicious reminder of a law recently enacted for the better regulation of critical native industries trading with antiquity.

But how came we possessed of this revelation, and

with a clearness that has passed it into law? Who told us?

Let us see what the Greeks tell us. It would appear that they did study nature from some motive, if not love. *Human* nature is not the question, for we all admit that they were sensible of nature's beauty in that department. Indeed, until their sculpture as well as their painting is destroyed, modern ingenuity can have no fair chance of disputing their claims herein. But it is in "savage nature," "the beautiful," "the sublime," "the picturesque," and, most of all, in the "domain of vegetation," that their disabilities lay.

And, examined here, they, truly, tell us very little about vegetable fibre and its appliances to the useful arts: nothing at all about guano and scientific farming (in the enlightened acceptation of the term): wholly ignorant of that beautiful fact in the vegetable kingdom gutta percha, with its universal appliances to commerce, and shut off from sympathy with American cotton, it is clear, so far at least, that they had not our reasons for loving nature.

So far so good. And if our sanguine critics would only stint their æsthetics at this point, and not fly off into poetical raptures about love of nature for herself and for her beauty, their case were promising: only we very much fear, if on this new count the Greeks can call good witness in their behalf, that then all the former evidence for the prosecution will turn round on the side of the defence.

And whence, it may be asked, if not from a profound converse with vegetable nature, and a fruition

of deep solace thence derived, grew up in the Greek that longing and at last fulfilled desire to find benign spirits in the herbage, in the trees, in the flowers, and the faint-voiced rushes? Or would these growths, if he heeded not, nor loved them, have been his chosen habitations for spirits his soul loved and worshiped? Through what degrees of pleasurable regard, of love, sweet awe, and ecstasy transcending ours, must he have passed on to that rapturous vision and belief? We love flowers, so we say; but have any of us read the deep lines of their beauty, the sad or joyous signs of their faces, unto the sympathetic telling of the story of their births? Have we so patiently regarded these creatures, that presently their forms and complexions transmuted into human semblance revealing jealousy, or love, or shame? What intense gaze of ours on a wind-scathed hyacinth has discovered Apollo's love and the jealousy of Zephyrus? or confirmed our faith to the tracing of the bereaved god's handwriting on its petals? Was this flower, or Smilax, or Daphne, or Narcissus, or any in that poetic flora, valued as a source of lucre, or graced each with its sweet fable for yielding the material for any Grecian textile fabric? Or, again, were these dedicated by name, as we dedicate them, to a prince, a general, a judge, or a millionaire? or dedicated solely and sacredly to gods? And which course of conduct, the modern or the ancient, argues the deeper sensibility and regard?

Let us go into the woods with the Greek (if recent critical researches have left him any woods to go into), and see if his sympathies with nature are bounded by

a love for trees and flowers? if the contemplation of these sufficed him, profound as that contemplation was? For it seems the indwelling soul or Hamadryad, to be born and die with each individual growth, was not enough to content a deep craving he had conceived to eternize the visible form and beauty, the *εἶδος*, once revealed to him in this vegetable world: so there rose out of the depths of his emotion a shy fair spirit but deathless, a divine wood-nymph or Dryad, to preside over and keep imperishable the type or idea for ever. With this evidence that the Greek not only felt intensely the beauty of this form of nature, but consciously meditated upon the fact of his feeling it, and bequeathed to us the fruit of his meditation lest we by any means should doubt; will posterity believe with this evidence, I say, before us, that we did something more than doubt; that we asserted to a man, with the faith of statistical conviction, that such sympathy with nature had no home in the heart and mind of Greece? We know not what ravages time may make with our records, but should this our age's comment on the Greek character be the sole one presented to posterity, and Greek writings by any means survive, the obvious deduction would be that we were wholly unacquainted with Greek literature.

For in making these deductions men are guided by reason: the nations whom we speculate about we give credit for possessing an average amount of wits neither dulled by the breath of flattery, nor clouded with conceit unto blindness. And if we do wrong here we cannot well do otherwise: but how it would enucleate these knottiest of questions could we but

clutch some collateral evidence; could posterity know, for instance, that the age which thus appraised the Greek soul had arrived at a pitch of philosophy which identified a nation's prosperity with buying in the cheapest, and selling in the dearest market; that such age could countenance the maxim, "self-interest the best patriotism," and "justice for the sake of her dividends"—an age with natural emotions run dry as this that disputed Greek sympathy with nature! Conceive what would be the rectifying effect upon posterity pondering our estimate of Greek emotions, could it possess such contemporary writing as the following philosophy on justice, honesty, and our "new passion for the rights of the weak."

".... But what is welcome and pleasant, and full of promise and hope, is to notice how commerce embarrasses war, and bothers the glory-hunters now-a-days. When Poland and Denmark could be allowed to perish unavenged, Chili certainly would expect sympathy in vain upon any other ground than that Spain is not Russia, nor even Prussia. But, thanks to her trade with Europe, and to the trifling fact that, except at Lake Superior, where nobody yet has started mining largely, there is no copper in the world like that from Chili, we are all immensely indignant with Spain—Paris and London alike. Never mind the motive, however. Let us stick to moral; which is, that this golden net of commercial intercourse weaving over the world—in which every new transaction is a thread, and every ship a shuttle—begins at last to catch and trip up the accursed and bloody sandals of war. Chili is to be saved from insult and brutal wrong, not because the age is heroic and lofty, but because it is thrifty and businesslike. In a vulgar passage from the police-courts yesterday, the Hispano-Chilian affair is epitomised. 'And, what did you say?' asked the

magistrate. 'We says, sir, says we, 'leave that gent alone can't yer? he is a customer.'" In that appeal there was all the truth of this new passion for the rights of the weak which has come out so strongly of late, especially in the copper market. For our part we hail it with joy; we are glad that honesty is beginning to pay, and that justice is defended for the sake of her dividends. Weave more meshes, trader and copper merchant! spread the net that catches dollars and doubloons wider over the land and sea. It would be better if the peoples of the earth, uniting independently of governments, disarmed for ever, and decapitated the devil of war; but the next best thing is to trip him up like this, and kick quarrelsome people out of the great shop of the world."*

Imagine posterity's eyes opening at this, collating the facts of our approval of self-interested beneficence, our belief that there can be justice for the sake of personal gain, that honesty can exist when the worldly advantage of the so-called honest act is certain, that a *thing* can be a *feeling*, beneficence benevolence, and that, for practical and moral purposes, we regarded the world as "a great shop," and ourselves as the sole lovers of nature.

But the few words more I had to say in deprecation of this arrogant conceit. Was Greek sympathy with nature limited to a love for trees and flowers? Were the birds, the "wee songsters" only loved and listened by the moderns, from Chaucer down to Burns and Shelley? Have we, with ears more deeply ravished, with emotions more true than those of Sophocles, hearkened to our nightingale than he hearkened to his beloved ἀηδών? Or has the nightly plaintive note meant more to us than unrequited love?

* *Daily Telegraph*, November 29th, 1865.

Have we found in that deep-throated threnody the wail for sin and sorrow that he heard, and Homer heard before him?—the sweetly wailing musically sobbing lament: the sorrow and shame for passion-maddened Procne, and the woe for Itys,—murdered Itys? Yet up starts some pert writer of articles, and avers that Greek poetry was exclusively joyous, and the poetry of anguish and sorrow a purely christian revelation! Even songless birds had a language to the Greek: the hoopoe, the woodpecker, the pheasant, the cock whose clarion sounds the silent hours, and the partridge who gets up on whirring wings to deprecate the cruel enmity of the jealous wing-maker, Dædalus.—Verily we are critics of a sort.

But the fables were created first, say these critics, and the natural objects were simply pegs whereon to hang the fables. That is, the fables in which were enshrined all thoughts and feelings dearest to the Greek, were deliberately attached by him to those very things of which (by the hypothesis) he took no thought, and for which he had no feeling? If anyone (advisedly at large upon society) can sincerely believe this, his power of resisting evidence would quite enable him to gainsay that of the very Greek himself, opening his mouth and telling, with Greek tongue, that natural beauty was in such high esteem amongst his countrymen, that the populace of Athens could listen well pleased at the theatre to the praises of their native landscape, and approvingly hear it advanced as their first and highest claim to the traveller's attention, recording hereby their conviction that the natives of other Greek cities would, at least, be at one

with them in this recognition of the claims of natural beauty. Thus the Chorus addresses Œdipus, now just arrived at Kolonos :

"Thou hast come, O stranger, to the seats of this land renowned for the steed; to seats the fairest on earth, the chalky Colonus; where the vocal nightingale, chief abounding, trills her plaintive note in the green dells, tenanting the dark-hued ivy and the leafy grove of the god, untrodden, teeming with fruits, impervious to the sun, and unshaken by the winds of every storm; where Bacchus the reveller ever roams attending his divine Muses. And ever day by day the narcissus, with its beauteous clusters, bursts into bloom by heaven's dew, the ancient coronet of the mighty goddesses, and the saffron with golden ray; nor do the sleepless founts of Cephisus that wander through the fields fail, but ever each day it rushes o'er the plains with its limpid wave, fertilising the bosom of the earth; nor have the choirs of the Muses loathed this clime; nor Venus, too, of the golden rein. And there is a tree, such as I hear not to have ever sprung in the land of Asia, nor in the mighty Doric island of Pelops, a tree unplanted by hand, of spontaneous growth, terror of the hostile spear, which flourishes chiefly in this region, the leaf of the pale gray olive that nourishes our young. This shall neither any one in youth nor in old age, marking for destruction, and having laid it waste with his hand, bring to nought; for the eye that never closes of Morian Jove regards it, and the blue-eyed Minerva."*

What was it in nature the Greek lacked eye or ear for? The Oread haunted mountains, the sun, the stars, the moon?—the wind, the sea, the rivers, the vocal springs?—and the mysterious spirit that inter-fuses these, that suddenly arrests us with awe of an unseen presence; the Pan who smites multitudes and

* Buckley's Translation.

armies; the feeder of all things on earth, and the delighter of all the gods in heaven; the guardian of flocks, of shepherds, and of hunters; the maker of rural mirth, and the harmony and ordonnance of nature's landscape, with its sounds and its sights beyond all painting; who created him?

But, in the face of nature's daylight, who are we of all the generations of this planet, to deliver our sentence on ancient want of sympathy with nature? On the fair earth's surface is there a spot we live and build on not deformed with modern ugliness which follows us as our shadow? What old town, or city, or village in England that is not beautiful in the old part, and hideous in the new? What new lodgment of our humanity not foul to eye and nose?—the springs and rivers foul with filth and factory refuse, the water black and noisome with the gift of our sympathy, and the air foul and murky with the stench of the water and the rain of Acherontic soot?

The Acropolis was once a barren rock, and the Greeks made more beauty to inhabit there than elsewhere was found in the whole earth. Leeds and Birmingham were once fair and fertile land, and Modernism has sympathized therewith, and, with its 'feeling for the picturesque,' has made them so afflicting to the soul, so uglily burdensome to the sense, so strangely and unnaturally hideous, that Milton's Pandemonium seems a city of refuge, and Dante's Inferno a relief. Where we have some cleanly water, as in Kent, is it sympathy with nature and the picturesque preserves it?—or sympathy with mammon and paper-mills? Look where Modernism thrives and flourishes

there nature frets and languishes. The woodlands are shorn, laid waste, and gone to brick-field; waysides, once lovely in nature's fair variety, are lined with long monotony of telegraph posts, and wires whereon the rueful wind laments: the wandering canals, of our fathers, following each winding of the valleys, reflecting woods, villages, and tree-embosomed spires, laying in level country a shaft of light across the landscape, spanned by bridges green with moss and maidenhair—have not our sympathies with the picturesque changed these for straight railway cuttings spanned with bridges neither green with moss nor fern, but black with belchings of the furnace? Where is nature debtor to our love?—and where does our love of the picturesque appear? In the conversion of rural inns into railway taverns, of windmills into steam mills, of hedgerows into iron, of rivulets into ditches, of green fields into ashes, of healthy sweet air into smut and reeky vapour, of the blue of heaven to the murk of hades?

If all this antipathy to natural beauty is our portion, an inheritance of one-sided civilization, a necessity of the time, we may submit decently and in silence: but is such an age to judge of sympathy with nature?—to weigh out the subtle elements of Greek soul with a balance at once partial and awry? That, from the mere fact of our *work* being alien from nature, and mechanic, we are prone to *talk* more about nature, may be traced to a law of compensation, in virtue of which law, too, Greek *talk* about nature would be less: while, in a subject as remote from nature as battle, say in the *Iliad*, the mind of the

nature-loving poet would be piqued and provoked, by separation, to remembrances of natural objects and allusions to such by way of simile and metaphor.

Accordingly we find Homer importing natural imagery into the midst of the battle-field, with an enchanting ease and mastery fatally contrasting with our studious attempts at "word-painting" or "the picturesque in verse." Suddenly we are carried, as by magic, far out to sea, and as suddenly placed in the midst of deep woods: or the thick array of spears calls up a scene of harvest time and reapers; or the fall of a young chief suggests the sidelong droop of a flower untimely nipped: Lycia, the kingdom of Glaucus and Sarpedon, must be a visible landscape with a river, and this an eddying river (*δινήμεντος*): the return of their leaders to the hosts is as the rising of fair winds to men at sea: Euryalus falls stunned by the *cæstus*, and up springs a reef scene with a fish flung stunned amidst rocks and seaweed: the host encounters some grim hero, and we see hunters rousing a wild boar or a lion: or two warriors contending for a corse will summon before us two lions struggling for one prey: or the glittering of camp-fires before Troy and their reflection in the silent river, image a windless moonlit heaven glowing with a thousand stars. While here, as if the poet needs must linger on the image, we have moon-touched mountain summits rising into sight, and a shepherd gazing happy-hearted—at what but a creation of the Greek brain and heart both in deep sympathy with nature?

But what clearer voucher (if our own emotions were awake) could witness to the Greek love of nature

being dominant, and not subsidiary, than Homer's distinct affirmation (at the opening of the 13th Book) that the supreme God of heaven and earth turns from the scene of heroic slaughter to look well pleased on the pastoral Hippomolgi, forgetful of the Greeks and Priam and Priam's city? And, lest we should think that this preference of Jove was a poetic speculation, not the poet's cordial preference, we find him ennobling these milk-fed people with the epithet "illustrious" (*ἀγαυός*) applied pre-eminently to kings and heroes, and moreover affirming that justice was with these, and the blessing of a happy longevity.

The winds, the waves, the moon, the stars, and the rosy-fingered dawn; the forests and the flowers of the field, the mountains, the caverns, the birds, and the savage beasts, are all pressed into the service of the Iliad, military as the service is. Even the whirlwind of the battle, with its whistling sling of stones and darts, and roar of rampart-dislodged masses, will still culminate in some image of nature, the war of winds and ice and snow whirling from the mountains and sifted on the plains, submerging the works of man and nature, and submerging the expended human passion.

Τῶν δ', ὥς τε νιφάδες χιόνος πίπῃσι θαμναί
 ἡματι χειμερίῳ, ὅτε τ' ὄρετο μητίετα Ζεὺς
 νειφέμεν, ἀνθρώποισι πιφασκόμενος τὰ δὲ κῆλα·
 κοιμήσας δ' ἀνέμους χέει ἔμπεδον, ὄφρα καλύψῃ
 ὑψηλῶν ὀρέων κορυφὰς καὶ πρόονας ἄκρους
 καὶ πεδία λωτοῦντα καὶ ἀνδρῶν πτόνα ἔργα,
 καὶ τ' ἐφ' ἁλὸς πολιῆς κέχυνται λιμέσιν τε καὶ ἀκταῖς,
 κύμα δέ μιν προσπλάζον ἐρύκεται· ἄλλα τε πάντα
 εἰλόβεται καθύπερθ', ὅτ' ἐπιβρίση Διὸς θυμβρος.

ILIADOS, M.

In the far-off future, when historical events shall

have accumulated beyond the mastery of the most patient reader, and little more than a nation's name and mental and moral characteristic will be quoted as its history, when the wise works of old time will have come into the front of it, as those of Confucius have begun to do in China, and as Greek life and literature seem nearer than old Saxon, I foresee that a necessarily psychological posterity will characterize this age as the vehicle of a soul quite incapable of apprehending the Greek soul. This prophecy is, however, conditional, the conditions being, what is very improbable, that this cant about the Greeks will survive. How, in the name of all that is grotesque and ridiculous, we have blown out this bubble to its present shortlived magnitude, might indeed be a question of some interest. The answer I would submit (and which I think will command some attention, though not now) is this: We have become very fluent orators of late, talking very much of all we know, and know not, of nature, landscape, and "the picturesque" especially. Now the more we find ourselves able to converse about the "picturesque" the more convinced we become of possessing much feeling and taste for "natural beauty"; and not less certain are we that all men who own these qualities (we would rather say gifts) in our perfection, will ever be talking of the picturesque. So that presently, when we wake up and discover that the Greeks never speak of the picturesque, nay, that they have no native synonym for such a choice commodity, the irresistible inference is, that neither had they the thing, and that our love of nature was unknown to them. The conclusion

follows from the premises. Just as we know some people are ever talking of their digestive organs, ever reminding their friends that they have digestive organs: all men will talk of what they have: *ergo* those who never talk of digestive organs assuredly have no such organs.

This, as far as it goes, is the true history of the rise and progress of the new creed: there is something more, however, which is this. In this period of starved, or (which is the same thing) unwholesomely fed emotions, we have a craving demand for new sensations; and he is really a public benefactor who can meet this demand by announcing any novelty, electrifying us with any new belief, like spirit-rapping, or startling us by the unexpected subversion of an old belief, such as that of the Greeks being (as we hitherto thought) a people only too prone to worship nature. And our ingenious critics have only, in Mr. Darwin's phrase, "availed themselves of a tendency to vary." This tendency of the age was the favourable or predisposing condition, and the accident of oratorical habits and self-adulation, availing itself of the condition, is, as stated, the efficient cause of this particular novelty.

It was no part of my design to say or do anything to accelerate the impending dissolution of this sickly bantling of philosophic dotage. Only such senile antics have significance; and it was as, perhaps, the most emphatic evidence of neglected impoverished emotions towards nature, that I wished to cite this our imbecile estimate of such cultivated sympathy with nature as the Greeks unostentatiously exhibit.

For if I have elsewhere said, in commenting on the wellnigh desperate difficulties of our case, that we are indeed unconscious of our deficiency, where should I find stronger confirmation than in the fact of our taking a windy verbiage and critical cant about sympathies with nature and the picturesque, for the veritable feeling itself? and, in the further fact of our denying the existence of the feeling wheresoever we fail to find this critical parade of it? And, again, if I have said (in attempting to devise a remedy) that we must counteract the tendency to morbid emotions (spirit-rapping, &c.) by a culture of emotions allied to nature,—antagonizing the preternatural with the natural,—how should I more strongly vindicate this view than by pointing to natural emotions so impoverished that they fail to appreciate, recognize, or identify the natural emotions embodied in Greek poetry?

The sooner this cant is got rid of, and forgotten, the better for the credit of our enlightened latter half of the nineteenth century.

I shall say no more now of this too-conclusive example of how emotions neglected and untrained in the direction of nature will attain to monstrous growth in some other direction, and most of all in the direction of the novel and the startling. It is hard to convince us that this is so, living, as we do, in, and seeing through, an atmosphere artificial beyond precedent, and dense with dust and vapour of scientific novelties. The fumous inspissated air of a laboratory in which one walks up and down trying this and the other novel combinations, breaking one's


shins against new discoveries,—I cannot call them inventions, since inventing is finding, and these so-called inventions find us; such an atmosphere is not friendly to philosophy or truth. Possibly not, we say; but is its presence so formidably universal?—Is it not rather local and exceptional? I fear it is the atmosphere we inhale, and, as best we may, see through, and are all, more or less, infected by; the less infected being the exception.

For, judging from the tone of familiar conversation, from the favourite topics of the dinner-table and assembly, from the tone and tenor of largely bought newspapers (reflecting the minds of the commonalty), from the utterances of leaders of public thought and feeling, whether in exact science, political philosophy, or fiction (which last makes the bulk of our reading),—who is there uninfected by this atmosphere of phantasmal wonder, by this tyrannous, unsated, and insatiable thirst for novelty? In exact science, if anyone, it ought to be De Morgan, and he countenances, or tolerates, “Spiritual manifestations”: in political and other philosophy, who is it if not Mill? and he looks forward to a Senate of both sexes, and ponders the possibility of twice two being five: in fiction, from his acknowledged supremacy in that branch, from his learning, his long experience, his high place, who, if not Lord Lytton, should be free from such infection?—“A Strange Story” answers this question.

This thirst for the novel, the astounding, and the preternatural, must be accounted universal when the most novel and astounding propositions are popularly

entertained. In all other times *some* propositions have been universally regarded as absurd or as the symbols of impossibility. It was proverbially impossible for a thing to be all black and all white at once, for two straight lines to enclose a space, or for a square to be round: these and some such truths were held to be primary and eternal, beyond the power of any conceivable experience to alter or affect: novelties might arise, but here there could be no novelty; and we consented that some things should not change. But now our itch for novelty will exempt nothing from change, not even these eternal truths; and accordingly we have it asserted that nothing is wanted but new experiences (and these arise every hour) to make it possible that two straight lines may contain a space, and that twice two may be five. The mere statement of a thing being fixed seems a challenge to the age to upset it.

This despotic appetite, one of the more striking characteristics of what may, in a word, be called "modernism," is a restless emotion provoked by the absence of noble and sustained occupation for the emotions generally, which, as I have said before, cannot be suppressed, but will be doing. The dominating influence of this prurient demand for variety is daily exemplified by your readers of very worthless fiction, who own, and are really capable of seeing, that the hash of incident they devour is absurdly unnatural and shocking to reason: only, they add, *any change* of incident is diverting, and they "feel" that they "want it." Readers whose emotions are enough refined and chastened to enjoy poetry (a form



of nature), spontaneously loathe and reject this rank diet. The same holds true in music: Bunsen says, "Almost everywhere do we find the admirable ancient hymns driven out of use by modern ones without power or spirit: all fixed forms, as well as the psalms, have been gradually discontinued, in order that people may every Sunday hear and sing something recommended by novelty."*

This characteristic passion of our time, which exhibits itself so variously, and not least of late in attempts at "rehabilitating" (as it is called) historical characters, showing that black characters are white, in short, is a passion too prevalent to be lightly disregarded: it has a large source and foundation in our studies and daily life. Commerce, machinery, physical science, these are constantly presenting new phases to the student of phenomena, whose *intellectual* estimate of these is as constantly changing, and who, only conscious of his *intellectual* existence, naturally conceives that all things are in flux and transition; and, therefore, that no established truths can be accepted. His ever roving intellectual faculties have no basis, no bond of union, and do not register themselves in the form of emotions, as the various phases of creation he discusses ever register themselves in the form of beauty. Had he a feeling, an emotional conviction, of this eternal result Beauty, he would at least have a conviction of one eternal truth. He would be less appetent of change and novelty (the most restless and self-destructive of all pleasures) because the detaining solace of beauty would hold

* "Memoirs of Baron Bunsen," vol. ii., p. 178.

him to a closer and deeper converse with one object. I have said what sort of culture would give him this harmonious grasp of both faculties, intellect and emotion, and have shown that such culture must coördinately develope both these faculties: moreover, by a course of inductive examination it has appeared what particular study will best concurrently develope and coördinate them: but how to procure for this study a befitting recognition and respect, and obtain for it a sure place in our schools, is a practical question on which I had something more to say.

If we could imagine that the classics had degenerated into a slovenly ungrammatical teaching of Greek and Latin through the wretched medium of inept, self-constituted professors, then the classics would occupy very much the same position that the language which once uttered accurately the forms of nature now occupies: and improvement would be equally hard in either case.

Why the classics have not sunk, and cannot sink, to such debasement, is because, in case of any want of unanimity amongst ordinary teachers, there is the authority of the great public schools, always silently arbitrating, ready with the means of solution; and, in the almost impossible event of disunion here, there is a final court of appeal to be found in the Universities. But why should not the Royal Academy perform a sort of university's office for the arts? To discern clearly how the Royal Academy of Arts is inadequate to the performance of this function, it is only necessary to observe the essential difference between the means of acquiring the degree of B.A. and that of R.A.

The great safeguard against declension of learning at the Universities lies in the fact that the recipient of its degree is not arbitrarily chosen but vindicates his claim to the title by passing an ordeal exact and critical, an indisputable evidence in the eyes of all that his acquirements have reached the required standard: his proficiency is, so far, a proved fact. But there is no such critical and patent test of the Royal Academician's proficiency, for he is optionally elected by the voice of the Academic Council, it may be, to the astonishment of the artistic body, and the equal misgiving of the public: there is, at all events, no critical and indisputable test of his ability. The Royal Academy represents genius, and not learning, and there is no critical test of the former. That this is practically true will at once be understood if we refer to facts. Has the sanction of superior scholarship accorded by the Universities to a Professor, in one age, in any case been reversed in a succeeding age? Pure Greek or Latinity once certified by the Universities, does not presently come to be accounted base. But painting or sculpture, a few years back certified by the Royal Academy to be good, is now, in some cases, condemned by this very Academy: the works of West, once thought worthy of raising him even to the Presidential Chair, are now scarcely graced with Academic notice. Hogarth, once in low esteem with the Academy, is now by it accounted a great artist. And such examples abound. There is, in short, though in a less degree, the same sort of uncertainty in Academic criticism that there is in "drawing-master's drawing," or, there is here, strictly,

an absence of criticism. Yet we have seen that critical tests are to be applied to all that is grammatical in art, such as anatomical structure and relation, muscular action or expression, linear perspective, light and shade etc., and that it is only the poetic or genius-side of art that is uncritical.

But, for other and more grave reasons, it is undesirable that the nation should accept the arbitration of the Royal Academy on the arts which represent human emotion. We have seen that national culture must not only be catholic, but that its various branches must be intimately co-related and coördinated, the intellect and emotion must be developed side by side. Hence the great judicial utterances in learning, philosophy, and science, should emanate from a common source with the judicial utterances on Art. And this universal representation of culture pertains, of right to the Universities. Schools of science, learned societies, art academies, are technical or professional institutions destined to specific ends, or the special training of men: they are rightly self-governed, and would not benefit by *direct* University administration or interference; but they will all inexpressibly benefit when each art and science are duly represented at the Universities; when each, here, is commutually apposed, not only science with science, and art with art but each art with all sciences, and each science with all arts, their collateral relations here duly manifested and felt, and their natural bond of union recognized. Without this recognition there can be no philosophy, and without a philosophy, all the astronomy, surgery, chemistry, physics, and fine art of all Royal societies

Royal colleges, and Royal academies, will be nothing but piecemeal plodding disintegrated human industry. Only from the interpenetrating presence of all forms of thought and feeling there will come the "supplementary efflux of light" reflected back on each special pursuit, suggesting new directions of thought and opening new channels of discovery: a consummation the exact reverse of that philosophic dogmatism which this age seems so nervously in dread of.

But if philosophy, that is, the wise entertainment of the worth and evidence not only of all thought but likewise of all feeling, will not impose any dogmatic cramp on human enterprise, but rather enlarge the mental prospect, there is yet one charitable office, of a negative or deterrent kind, which it will perform on a very large scale; it will—and here comes the shock to nerves whose life depends on novelty—it will cry forbear to an almost infinite host of small human activities, each one undertaking some novel and hopeless enterprise, attempts as hopeless as a child's to overtake its shadow, as recent attempts to advantageously colour sculpture, as Mr. Smee's to draw a binocular picture, or Mr. Mill's to shew how twice two might be five.

That such attempts sometimes stumble unaware over unlooked-for facts, must be admitted: but it is more important just now that we understand the facts which we have, than seek for new ones by a process the reverse of intelligent, and which, indulged in, will abridge our understanding power while it piles up new tasks for the understanding. If the gradual revelation of facts should be proportioned to the mind's

power of grasping them, these haphazard discoveries are likely to prove a real evil: for haphazard experiments can find but the bare fact. Which fact, once possessed, should be forthwith enquired into, lest presently becoming a part of our existence, it cease to stimulate enquiry, nor indeed seem to demand, nor apparently to admit of it any more than do the ever-present facts of our feelings and emotions, which, despite their amazing significance, have come to be oversighted and disesteemed as evidential elements in reasoning. Yet, surely, if, as I contend, there is at this time rather a deficiency of philosophy, or *whole-understanding* power, than of facts, then I shall not convince this time so well by reason as by facts. To take the evidence of facts, then: Emerson, an advanced liberal thinker and a son of the most enterprising nation, also acknowledges facts in the ascendant, saying, "Things are in the saddle, and ride mankind." He, then, is a fact in evidence of facts having outrun philosophy: and, this being so, the more catholic philosophic function I have foreseen devolving on the Universities need not threaten us with dogmatism at present.

When the Universities shall have taken all the educable human faculties under their wing, then they will have taken the first step in the direction of evoking a philosophy, and in the direction of rescuing modern culture from the shame of sumptuously clothing one side of humanity while it leaves the other naked; from the shame of having neglected and forgotten what the Greeks were so studious of nourishing.

Although this hiatus, this gap in modern culture,

has not, to my knowledge, been hitherto demonstrated, yet one of its inseparable concomitants, the want of a philosophy, was detected and most keenly felt by the late Professor Grote, who, amongst all the leading representatives of modern thought and science he examines, fails to light on one who is not infected with what he quaintly calls "the wrong psychology." So that even of Mr. Mill he says, "Phenomenalism, with a philosophic mind like his, will not stand alone, and if it cannot have (what seems to me) right philosophy to support it, must have wrong." Now this evidence is the more interesting and instructive because it appears guilty of some contradiction in first ascribing to Mr. Mill a "philosophic mind" and then taxing him with "wrong philosophy." Grote had before said, "If any person would have been likely to avoid Notionalism, or the wrong psychology, one would have thought that Mr. Mill would": and thus he bears unconscious witness to the fact of *mere mind* or *intellect*, however highly cultivated, and, in our language, philosophic, being, after all, unqualified to take the true title of philosophy. And this is true: for not until the emotional moiety of our nature, duly cultivated and incorporated with the sciential, has supplied the broad foundation whereon to build a philosophy, can philosophy ever find the "support" that Grote speaks of.

But there is a want of this support, a chasm at the foundation: for as in commenting on what appears to me Mr. Darwin's and Professor Huxley's false conclusions, I have traced this result of their (otherwise) admirable investigations to the fact of their exclusively

viewing the sciential relations of phenomena, to one another, as they call it, but really to us, since *we* take this view,*—to the fact, then, of their considering the sciential, minus the emotional, relation of things to man; so, when Mr. Mill discusses, and denies, a primary (and prior to all experience) conception of cause and effect, I find him neglecting the consideration of emotional evidence. For, while, combating Sir W. Hamilton's theory of pain and pleasure, he indeed considers the sensations of these, and derives them from outward experience, he seems to forget that pleasure itself, which must first be a potential belonging of the soul before it can be identified with the thing we learn by experience to call pleasant—he forgets, I think, that this emotional element of the Ego is often a conscious sequence of certain equally conscious sciential activities of the Ego, and so an intuitional and primary evidence of antecedent and consequent. It is true he may assert that both sciential and emotional activities are borrowed from without, but this would be denying the soul its simplest attributes, thought, feeling, and energy, or denying its essence altogether: for energy minus thought and feeling will not define the soul, but, on the contrary, might define matter, with its *vis inertiae*, or energy to persevere in one state.

In a word, I would submit, that we are nowadays aiming at a science of nature, that is, endeavouring to state the fact of things as it affects us, us human beings self-conscious of two faculties, intellect and

* See a very original Essay "On Some Characteristics of Modern Philosophy," by George Barraclough, M.A. (Bell and Daldy).

emotion, but considering and reasoning exclusively with an eye to one faculty, or as if we were other than we are, and not only other but less.

But as it would be wholly unprofitable to have this truth conceded, whilst to concede the culture it demands is deemed impossible, and as I conceive it the function of an University to preside over and represent culture universally as a whole and not a part, it is necessary to shew, however briefly, that the culture I ask for can be represented at the Universities, and that the fact of its adequate attainment by the candidate for degrees can be critically established by examination.

I do not mean to assert that we can examine the emotions directly, but I do affirm that we can prove by a critical test whether their discipline has been such as must necessarily conduce to their refined development in harmonious relation with intellect: that we can obtain evidence of our Bachelor of Arts being *grammatically* conversant with that art to which the Greeks gave the highest rank among the liberal arts: that he will be able to think and feel for himself on this subject, discern its manifold significant relation to all branches of natural science, and, most of all, recognize (if not love and enjoy) one, surely important because never-failing, attribute of nature the Beautiful. Some earnest will thus be given that the man who is to go into the world with a certificate of culture for his passport is a cultivated man and not a cultivated half-man; that he will be able to hold his station amongst men in virtue of his more catholic manhood, judging not only of what is elegant in literature, and

exact in science, but also of what is true in art; and as capable of selecting good painting and good statuary as good books:—a privilege which his present education does not confer.

First, for examination in so exact and important a section of art as Perspective, a mastery of which by the candidate for degrees would, it will be seen, give him a great command of judgment in art matters, I would suggest something like the following paper.

Linear Perspective.

1. Demonstrate with rule and compasses, some of the errors in the drawing given you.

2. Show mathematically whether the figure *A* in the drawing entering the door *B*, in the front of the buildings seen in angular perspective, could enter the door *C* in the side of the same buildings.

3. By use of the Measuring Point, demonstrate that a Vanishing Line is infinitely divisible.

4. Prove that an ellipse, drawn in perspective, may be a circle, or a straight line: and that a circle not parallel to the picture must be an ellipse, or a straight line (à propos of conic sections).

5. Justify what is called the Error in Perspective, *i. e.* state under what conditions, objects or dimensions of equal magnitudes, at equal angles with the picture, and at equal distances from the eye, are rightly drawn of the same magnitudes (à propos of logic).

6. Why, in perspective, are verticals always vertical, but horizontals not always horizontal?

7. Given, that the nearer any point in the field of vision is to the centre thereof, the more distinctly it is seen, prove that the field of vision is a circle.

8. Show binocular perspective to be impossible.

9. State in words what are the Vanishing Points for an

octagonal prism, one side of which is parallel to the picture plane.

10. Find accidental vanishing points for a plane inclined at a given angle to the horizon, and under other optional conditions.

11. Given a point on a Vanishing Line beyond the picture plane, set off, in perspective, a given distance from said point upon said Vanishing Line.

12. How does Linear Perspective illustrate the Distance-law of aerial perspective; and exhibit the rationale of what is called Texture?

Aerial Perspective, &c.

1. Shade an octagonal prism, the position of the light, and of the object, and the form of the apartment being given.

2. Under what conditions should two surfaces that are equally light, and equally near the picture plane, be represented by unequal degrees of light?

3. A small surface is parallel to a large window; prove that the centre of said surface is really its lightest part (à propos of optics).

4. Given the relative position of a cone, a cylinder, the light, and the eye of spectator; make a shaded drawing of said cone and cylinder, showing cast shadows (à propos of orthographic projection).

5. The drawing presented to you is inexactly shaded, the near parts being too deep, and the distant too dim: explain why the drawing, nevertheless, expresses relief and distance. Explain also how such relief and distance are inappropriate, and state what element of the drawing they are inconsistent with.

6. In a monochromatic drawing, how do you express the difference between half-tint and reflection, when these are of equal intensity in nature?

7. In a faithful monochromatic drawing, what form of concavity does the aerial perspective of the sky express, both

in respect to varied intensity of tint and texture thereof? What causes this apparent form of the sky, and how is it related to the enlarged appearance of the sun and moon near the horizon?

8. State some conditions under which local lights and shades, as well as colours of objects, are modified or quite changed, and show the fallacy of recipes for landscape and other colouring.

9. When are shadows on water visible, and when not?

10. Assume a luminous point for Prime Radiant illuminating any opaque surface, and show by diagram why the whole surface appears light, also under what conditions one point only appears so.

11. Why does the sky appear blue? Why are sun-shadows generally tintured with blue? and why are they sometimes not blue?

12. Demonstrate optically why statues, that are to be viewed from more than one point, cannot be truthfully coloured.

If a cursory survey of these questions (all of which ought to be familiar to every judge of art) fail to impress us with a sense of the manysided character of their subject-matter and its interjacent relation to the sciences, and fail also to apprise us of our unconsciousness of the existence of certain truths inhabiting this border-land of thought, it would be well to ask ourselves plainly how many Bachelors of Arts are conversant with questions concerning their own eyes, the cause of the visible form and colour of the sky, of the figure of the field of vision, of the eyes' sense of distance and magnitude, or the impossibility of correctly colouring sculpture?

The questions I have here suggested are, however, mere suggestions and hints toward a more matured

scheme of æsthetic examination; they are all as amenable to exact solution as any questions in mathematics, and are studiously adapted to aid the connoisseur rather than the professor of art. Yet comparatively simple as they are, they import an element of certainty into the subject which would render any one familiar with them, capable of convicting of error such works of art as we now accept on trust; and, once capable of condemning these on points we understand, therefore authorized to suspect them on other points. But I would strenuously recommend the application of a more liberal test of that associated discipline of eye and hand heretofore insisted on as the one means of stimulating observation and fostering a sense of natural beauty, and this not solely with a view to the qualifying of artists. Assuredly the following tests of æsthetic discipline would not have been thought too severe by the framers of the Sicynic Law, who, let us remember, designed it for the qualifying of men, not of artists.

Hints for an Examination Paper on Geometric, Inorganic, and Organic Form.

1. Draw angles of 90° , 45° , and 10° by eye.
2. Draw the Five regular solids in projection.
3. Draw the Conic Sections by hand; or distinguish and name the conic sections given you.
4. Draw the crystal, fungus, seed, egg (of *Bulimus ovatus*), and bird's egg given you.
5. Detect the circle, the ellipse, the parabola, or hyperbola, if present, in any of the vegetable or animal forms shown you.

6. State what vital forms are characterized by the presence of circular, elliptic, parabolic, or hyperbolic curves.

7. State why the circular curve is rarely found in any of the higher forms of life.

More advanced Examination.

1. Draw your left hand and wrist, mark and explain the anatomical constituents of the outline, terminations of bones, and tension or turgescence of the muscular parts.

2. State the general proportion of the bones of the hand.

3. Show the office of the annular ligament in behoof of mechanism and of beauty.

4. State the general proportions of the human figure, and the principal modifications of these proportions characterizing the divinities of Greek sculpture.

Hints for a further Examination, conducted by aid of the living form, designed as a test of the habit of observation, and of the co-ordination of thought and feeling.

1. The whole of the face, from the eyebrows downwards, being covered, tell when the mouth is open, and when shut: and the same of the eyelids.

2. By the appearance of the face, judge when the teeth are set, and when not.

3. By observing the eye, judge when the sight is directed to near or distant objects.

4. The arm being hidden from the elbow downwards, discover, first, when the forearm is bent; second, when the palm of the hand is turned upwards; and third, when the wrist is bent laterally.

5. By examination of the forearm, when the hand is hidden, tell whether the thumb is bent or extended; and the same of the fingers.

6. Describe the mechanism employed in jumping, and

what muscles painters and sculptors should represent participating in the act.

7. Exhibit rudely in diagram, the three following muscular actions: 1st, that of raising the chin by depressing the occiput; 2nd, that of raising the weight of the body on the ball of the foot; 3rd, that of bending the forearm. Indicate the point of the application of power, the position of the fulcrum, and that of the resistance, in all of these actions, and ascribe to each the order of leverage to which it belongs. (All *three* orders, not commonly recognized in *animal* mechanics.)

8. What order of leverage does Rotation (such as that of the Radius, the Os humeri, and Os femoris) belong to? Draw diagrams to explain this.

9. Show, by artistic consideration of the symptoms of muscular action, how the so-called Biceps Flexor Cubiti is a weak but rapid flexor, and a powerful supinator of the forearm; and how the so-called supinator longus is mainly a strong flexor and weak supinator of the same. Show also how this arrangement affects the beauty of the arm.

By the last three questions we may learn that the manifold relation of the graphic art to animal mechanics, or anatomy, opens too many new springs of thought, in behoof of beauty as well as structure, to permit this subject to remain a matter of lay indifference, or a science restricted to the surgeon, who, regarding it with a mere view to surgery, fails to approach it comprehensively even from his own standpoint, and, together with the student of mechanics, overlooks not only contrivances for beauty, but actually much mechanical adaptation, which he who brings to the task the lucid aid of the pencil at once discerns.

So true is it that no science can prosper in isolation,

and that all arts and sciences, like all human faculties, intercommunicate, and borrow light from one another.

In conclusion, I would prefer my prayer to the Universities, that they in their wisdom consider not only the need of rightly construing the words of Homer and Æschylus, but also the urgent need of construing the words of the Omnific Poet, of reading these words, the fiats of creation, *in all their variety of utterances*, to the head and to the heart, through structure and through beauty, through wisdom and through love, with care, with understanding, and with sympathy, acknowledging their inviolable concord and government, their universal value, and their authorship.

ADDENDUM.

HOW WE WRITE ON ART.

HAVING indicated, in a paper entitled, certain *moral* impediments in the way of our attaining to the high-art perfection of antiquity, and having commented on the futility of our present course of art-training until these moral obstacles are removed, I am just now, unhappily, in a position to point to an example of this moral deficiency furnished me by a paper* in the *Saturday Review*; an example more emphatically exponent of the truth of my opinion, inasmuch as the periodical in question is perhaps more free than any other from those ascetic views of nature and poetry, which constitute (according to my position) a characteristically modern inaptitude for art—a moral element in this country underlying our failure in all public works of art.

I call it a *moral*, rather than an *intellectual*, element, because not only in the sciences, but also in art, whenever ascetic moral training does not cramp us, negating emotional sympathy with, and religious devotion to, our subject, we are in no wise inferior to the

* "Binocular Vision and the Painter's Art."—*Saturday Review*, August 9th, 1862.

ancients. But in art this exemption is very rare; since, while it is a conventional usage with all of us to choose an occupation in life for the sake of gain, and not with a view to the exercise in God's service of that special talent He may have given us, in *art alone*, were it otherwise, there would be no public recognition of an emotion-governed choice of occupation; the motive of him who made it would be incomprehensible, as unintelligible in all respects as his choice of subject, for artistic embodiment, if that were guided by no view to gain or popularity, but solely by inevitable duty. Accordingly an artist of our time, whose choice of subject *is* so guided, is provoking the daily astonishment of his admirers (even) for not following the *safe business plan* of producing *variations* of a once successful subject, which cost little labour to the artist, and are the more eagerly devoured in consequence of the public having been prepared for their reception by a foretaste in the original work. It is clear we shall never get serious works from the artist till we give him credit for serious intention and a devoted self-sacrifice here involved. But an ascetic religious training steps in, teaching us that art is vain trifling, a pardonable weakness, at best, something Christianity may wink at, but never invest with Christian duties.

Now it is in reference to these tendencies of modern, and especially Protestant* English thought, that I would notice the characteristic carelessness with which otherwise careful and scientific writers are led to take up for a whim some subject of artistic importance, a subject which may be quite new to

* An accident, and no necessary belonging of Protestantism.

them, to which certainly they have not given the serious attention it requires, and to bring their otherwise logical analysation to bear upon it so far as necessarily imperfect data and experience permit;—to give to the world, in short, as a result of scientific investigation, that vicious product which the involution of true and false must, mathematically, elaborate.

Without any least idea of doubting the attainments of the writer referred to, in some branches of science, his serious pursuit of his own studies, or the conviction he may entertain of having treated seriously this subject, my intention is simply to exemplify, by quotation, how he has (unintentionally) been guilty of the carelessness, and arrived at the half-scientifically induced error, I have referred to. I must affirm, then, that his subject "Binocular Vision and the Painter's Art" has been chosen whimsically, *i. e.* from a hasty inclination, backed by a hasty conviction that his means of enquiry were adequate.

The writer commences by asking "Can a man paint what he sees?" and adds, "On the answer to this query depends the solution of the problem involved in the disputes between the literalists in painting and their antagonists," a position so false that it betrays, at starting, an utter want of acquaintance with the tenets of the schools in question; seeing that both literalists and their antagonists, together with all other artists who understand perspective and the mere grammar of their art, are equally agreed upon this subject.—Surely it would bode ill for any writer on geometry who should commence by referring to two schools of geometers whose differences

hinged upon the disputed possibility of making a triangle the sum of whose angles should be equal to *more* than two right ones ! Then, after some witty prolusion with another query, viz., "Ought a man to paint what he sees ?" and final recurrence to the former question, "Can a man, etc. ?"—he gravely asserts, "the answer is sufficiently obvious, and yet we could not put our finger on any passage in any book where it is honestly given." An unaccountable inability, in anyone writing upon art, when the text-book of every student, *Da Vinci on Painting*,* states distinctly (and I presume honestly) that a two-eyed view cannot be painted, demonstrating, moreover, with an illustrative diagram, the cause of this impossibility, in all respects as satisfactorily and conclusively as a geometrician could demonstrate the 32nd of Euclid's First. But to proceed. "A man can paint what he sees with one eye, but not what he sees with two eyes. In this proposition we venture to think that one great secret of the painter's art is contained." Now the humility of "we venture to think" (as if the writer were cautiously advancing a novel proposition of his own) might well have been spared, seeing that the responsibility of the assertion rested, some centuries back, with Da Vinci, and has since been unflinchingly shared with him by every poor student of art up to (in the writer's phraseology) "these days of Ruskinism and anti-Ruskinism": an expression which certainly implies that our artists have only two alternatives, the opinions of Mr. Ruskin or their converse. We are next told that we owe a visible perception of one object to two eyes, or, in

* "Da Vinci on Painting," Rigaud's translation, cc. 124 and 348.

the author's periphrasis, "to the combined action of two separate optical instruments placed side by side in the human countenance, a short distance apart from one another." The *Saturday Review* knows best whether this is a euphemism ; but however it be, art's monitor says next, in plain English, that "each eye sees something which is not seen by its fellow. The right eye sees more of one side of a solid object, the left eye more of the other side of the same. The image produced on the retina of the right eye is thus very far from being an exact facsimile of the image produced on the left retina." But, as this is not the writer's discovery, we may safely go on to state the facts more quickly, though possibly less elegantly, thus :—If we hold the finger midway between the eyes and the book we are reading, we can, with two eyes, not only see the finger, but all the letterpress on the page beyond it ; while, to the single-eyed view, a portion of the print must be obliterated by the interposed finger : whence the two eyes give a *certain evidence* of one object being in advance of another, an evidence denied to the single eye, which must derive *its exponent* of distance from another source, namely, the more distant object's loss of distinctness and magnitude. Now it is obvious that this advantage on the part of binocular vision relates only to the comparative foreground of the view. In looking out of window at the houses opposite, we see, upon shutting and opening the two eyes alternately, that our sash-frames seem to shift their place upon the opposite windows, the distance of two inches and a-half between the pupils furnishing sufficient parallax to produce this effect : but when

a poplar, half a mile off, hides the clock of the village church a furlong beyond it, we should hardly expect by shifting two inches and a-half to catch a sight of the clock. The sharpest eyed observer could not detect the least parallax motion in this case, as anyone may ascertain by experiment: and yet our author seriously asserts that it is to this limitation of the parallax function of two-eyed vision that the loss of all conception of "the actual distance of sun, moon, and stars" must be attributed! Without commenting upon this defiance of scientific authority, farther than to observe that no one would venture to write so erratically upon any subject except art,—I shall proceed to examine the author's theory. Having stated, and proved, (what no artist disputes) that we cannot paint a two-eyed view, and insisted upon the theory (Professor Wheatstone's) that our perception of distance is owing to two-eyed vision—a pictorial impossibility, by his showing, he proceeds to tell us we must effect this impossibility by "a conventionalism," thus: "the sense of space" (he means distance from the observer) "depending on two conditions, namely, an alteration in colour graduated by the relative distances of objects from the spectator, and a perception of two separate views of each object, the loss of their binocular perception necessitates" (mark 'necessitates') "an increase in the varieties of actual tint. A picture in which each separate portion is coloured up to the tone of the original scene presents an impression totally unlike" (mark 'totally') "that of the real scene when taken as a whole. It is utterly without what is technically called 'space' and atmo-

spheric effect.”—But no whit more so (by the author’s own teaching) than any one-eyed view of nature—the only view of nature which Da Vinci, the author (at commencing), and the profession hitherto thought possible. But still, since the remedy is given, let us see what is its effect. Let us concede to the writer what he affirms, that by “exaggerating,” or putting out of *monocular truth*, the *aerial perspective*, we obtain a distance-equivalent for the binocular distance he would express; and we have thus secured to the picture at least one binocular element,—one evidence, in fact, that the view we are taking is two-eyed: now does it not occur to him that the *linear perspective* (which cannot be proportionately exaggerated) is asserting all this time that the same view is taken with one eye?

In the next place we are referred to the works of “the greatest artists” in proof of this exaggerated aerial perspective being indeed scientifically true to nature and fact: Turner, however, is the sole authority cited. Now Turner, it must be remembered, though only one man, may be regarded as more than one artist, seeing that the various “Turner-periods” present works differing among themselves more than the works of one artist often differ from those of another: yet no *one* Turner-period is referred to. It is possible, however, from the writer’s statement that “no man ever produced the same impression of space and distance as Turner,” that what may be termed (for the guidance of the uninitiated) the *misty period* is the one contemplated: a period characterized by works more essentially poetical and less actually imitative than anything hitherto painted. We all know how

long we stood looking at these works, detained by the enchanting spell of colour, before we could rightly tell what the objects we were looking at were: but are these pictures (ravishing colour-symphonies as they are) to exemplify how nature is to be painted more faithfully? more scientifically true to the *solid reality*? It is incredible that the writer could have meant this; and when he says that "Turner marks the gradation of light and shade with an unrivalled accuracy of eye and delicacy of touch," it would seem certain he *did not* mean this; though when he immediately adds that "he (Turner) positively exaggerated them all (the lights and shades) back to the farthest horizon"—"that no extreme distance ever really appeared as faint in colour as it does in his pictures"—and that "the tone of a building, say a quarter-of-a-mile from the foreground, is as subdued in tint and as hazy in its outline, as if it were a half-a-mile away"—it is hard to conjecture what he does *mean*, though the source of his confusion is discoverable. Trusting to criticisms on different works, he finds that extreme accuracy is one of Turner's attributes (as it was in the early imitative period); then, possibly examining for himself specimens of the late misty period ("Fallacies of Hope," "Bacchus and Ariadne, &c."), he finds the exaggerated aerial perspective he admires; and, lastly, blending the attributes of accuracy and exaggeration as the characteristic quality of *one* of Turner's pictures, he reasons that exaggeration must be accuracy, or that accuracy must be attained by exaggeration.

But passing this unfortunate attempt to be prac-

tical, and the unaccountable absence of that experimental knowledge which the subject would seem to demand—and *does* actually command for almost every subject except art—let us take one final retrospect of the *science* of this binocular theory. It is to exert its influence mainly in behoof of the extreme distance of a landscape; and yet the *scientific fact* is that binocular vision is a nullity in behoof of that distance: and, again, if such a theory carried out could furnish any equivalent for a binocular view of nature, in the *foreground*; the remaining impossibility of painting one object behind or underneath another, so that we could view either at pleasure, (as we do in the natural foreground viewed with both eyes) would render the attempt the more inconsistent, disproportionate, and ridiculously illogical.

The author then proceeds to “outline” as affected by binocular vision; and says, “that the brain, in combining in one the diverse images wrought upon the two retinas, melts them together with a certain indistinctness of outline”—“acting upon this truth,” he adds presently, “almost all the greatest artists of all schools have given a certain cloudiness of outline to their pictures.” But, as in the former case, when the example of the “greatest artists” was laid claim to, Turner alone was cited in evidence; in this case, where “cloudiness” is to be established, no cloud of witnesses is called; not a single authority is cited! Now, if counter-evidence were needed, “Müller’s Physiology” and an experiment in Bacon’s “*Sylva Sylvarum*” might be put into the witness-box to overturn the *scientific* dogma about the “brain melt-

ing the images, &c.”; to say nothing of the fact of some consequences of the Strabismus operation disproving the *brain's* participation in the phenomenon, by proving *mind* the sole agent. And if counter-evidence to the *artistic* dogma were desirable, the examples of Giotto, Angelo, and Raffaele might suffice. But let us concede the fact of what is proposed, and examine what must necessarily ensue. This softening of the outline is effected so as to represent a two-eyed view of nature:—granted; and the linear perspective of the *same outline* witnesses this view is one-eyed. The “greatest artists,” then, are convicted of artistic solecism.

Finally, having stated that the works of the Literalistic School “in some respects are as untrue artistically as they are untrue both optically and dramatically” (a relative statement which is true, though not as the writer conceives it), he directs us to Holman Hunt’s “Christ in the Temple” to exemplify the sad consequences, in a dramatic point of view, of neglecting the *binocular theory*. “It cannot be denied,” he says, “that the moment the eye is specially directed to any one portion of a scene, an increase of indistinctness obscures every detail on which the mind’s attention is not fastened. The sense of light, the sense of form, the sense of colour, all grow feeble in respect to every object except those which engross our emotions for the moment. To represent all these half-forgotten details with the same vivid minuteness with which we paint those features of a scene which fill the mind, is to violate the first principles of dramatic truth as expressed in

art." Here the premises, at least, are correct. "It cannot be denied" that the objects we are not looking at are much more indistinct in every way than those which we are looking at; but, again, the conclusion is not so clear. Suppose, for instance, we are witnessing the fact of our Saviour's charge to Peter; while we are looking at St. Peter, the figure of Christ will (by the premises) grow indistinct, and that of St. Peter will, in its turn, be indistinct when we look toward the Saviour. In a painting of this subject, it will be the same if both personages are painted distinctly, but not else: and the same is true of the keys, the flock of sheep, and the landscape beyond. Whichever we look at in nature will become more distinct for the looking at: but if, according to the writer's teaching, the landscape should be painted indistinctly, will it (as his premises require) grow distinct when we happen to look at it? His answer must be, that we have no right to look at it, because it pertains to his category of "half forgotten details." But this will not vindicate his treatment which he grounds upon truth and science: the landscape *must* become distinct, if we look at it; more distinct, in fact, than the figures: and if he cannot compass this miracle, he must compass another quite as hard, namely, *paint an invisible landscape*, or utterly prevent our seeing it.

No, this plea of science and truth is a bad one. If he had simply said it was his resolution never to look at some parts of a picture, there would have been no objection (after he had converted us all, on this point,) to his prescribing the *scientific law*. "Mr. Holman Hunt's picture of Christ in the Temple," he

assures us, "is one of the masterpieces of the Literalist School; and notwithstanding certain defects, is a truly great and noble work. But will any man pretend," he continues, "that if by possibility he had been a living witness of the event pourtrayed, he would have seen the elaborate architectural background, the distant landscape, and the subordinate personages presented, with that clearness and minuteness of detail which they possess in the picture?"—not unless he happened to look at them, in which case he would (by the writer's own premises) have seen them *more clearly than anything else*. But can the observation that follows, "such a cold-blooded cataloguing would have been impossible to any sympathizing mind," imply that his supposed witness of the event *could not* have looked at the landscape, the sky, or the new court, then building, to the Temple? This can never be the opinion of the writer whose avowed sympathy with the main features of the picture would, in this case, have assuredly prevented his seeing the landscape at all, not to speak of detecting its "minuteness:" and what would have become of the "dramatic" proprieties?—of the clear eastern climate of Jerusalem? if, when the writer did so look at the landscape—as it seems too certain that he did—his eyes had encountered a mist, a haze, or a London fog?—"Ars est celare artem," he says, and says truly; but to conceal, there must be means of concealment;—and the mind might be startled, and ask for the means of such concealment in an eastern atmosphere. Lastly, as to the possibility of the eyes of any one present being directed to the architectural details, so offensive,—is it alto-

gether impossible that amongst the "questions" the Saviour asked, one question might have reference to this new court of the Temple?—to the reason of its being built? or to the text, "Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you?"—Is it impossible that Christ pointed to the Temple?—and if He pointed, is it impossible they looked?

To conclude, it is nothing uncommon to find people so unacquainted with the specific nature of painting that they fancy it can, like verbal painting, verse, *merely indicate* an object without presenting any of its particulars; yet this ignorance in point of art is not encouraging: but when a writer (in a high class periodical), proposing to give scientific counsel, evinces the selfsame ignorance, it is not only something worse than discouraging, but points to a tacit conviction among the educated that art is undeserving of much serious consideration. How such a practical conviction can exist while we profess that a knowledge of art as well as science is essential to mental development in a Christian community, might be worthy of a candid investigation; but what is the actual working of this incongruity, or rather direct antagonism, between what we profess and what we practise, I have endeavoured to set forth in the paper already alluded to, the conclusions of which are unfortunately only too well substantiated by the crude inexperience and self-confident assumptions that characterize the teaching here reviewed.



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